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ABSTRACT

Intended as a guide for initial program implementation, the document presents an overview on programing for gifted and talented students. Chapter 1 reviews underlying philosophy and the rationale for program development. Goals and objectives are stated along with a summary of teaching techniques and approaches for elementary and secondary students. Program organization and scheduling are addressed in terms of team teaching arrangements. The chapter on teacher role presents reference materials regarding teaching styles, significant behaviors for teachers of the gifted, and a checklist for teachers' self evaluation. The identification process is reviewed, and reference materials cover teacher, parent, peer, and self nominations of students to the program. Curriculum criteria are noted and questioning techniques reviewed in the chapter on curriculum--half of the document--which also includes sample units in cultural arts, language, mathematics, science, and social studies. Two final chapters address matters of program evaluation (sample forms included), and finance. (CL)

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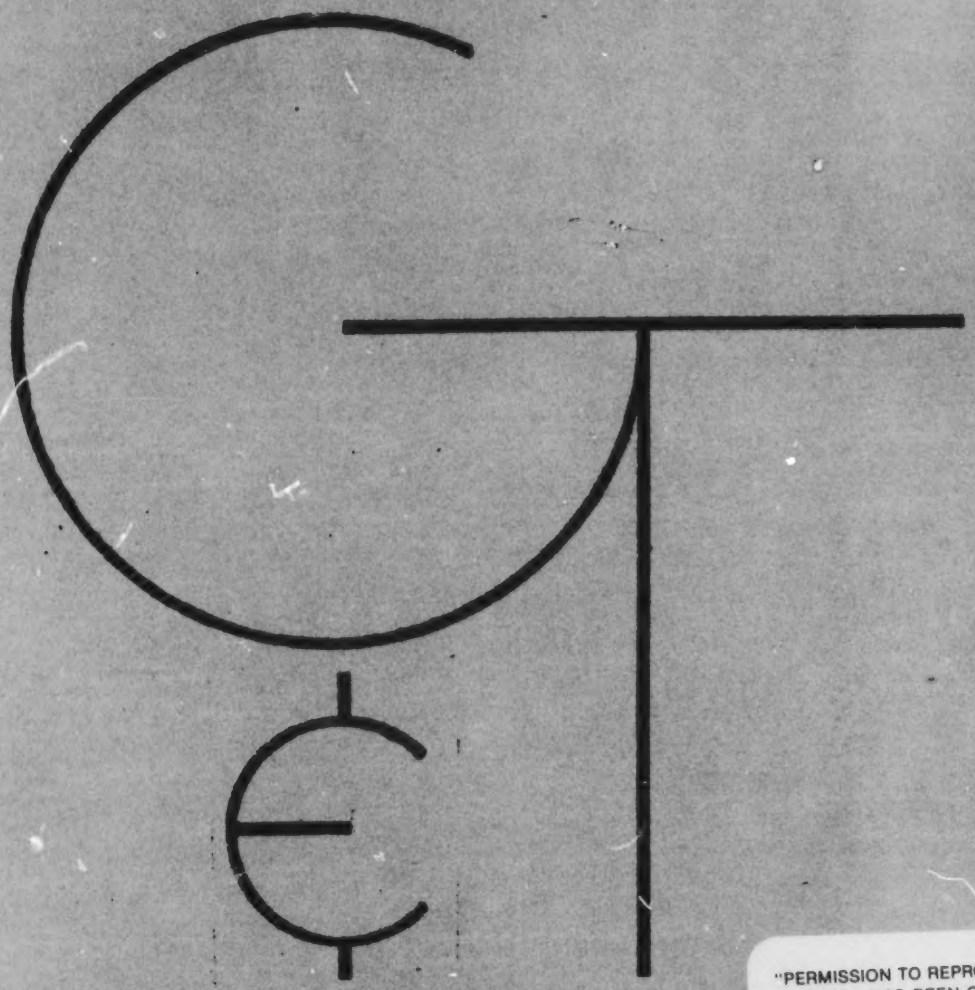

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Hicksville's School-Community Program

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PREFACE

An old axiom in public education reminds us that our primary mission is, or should be, to enable each student to become all that he is capable of becoming. It's a worthy reminder, even if we at times fall short of that goal.

When it became apparent that the handicapped (both academic and physical) had needs which were not being served by the schools, necessary steps were taken, sometimes under duress, to adjust programs and facilities to accommodate those needs. Today, with few exceptions, these students are receiving an education that enables them to become a part of the functioning mainstream of learners. Similar attention and subsequent provisions have been made for students with deficiencies in reading and mathematics skills, for the emotionally disturbed, and for those in numerous other categories of "special" needs.

The time is here when we must make special provisions for the gifted and talented if we truly believe the credo that each student should achieve to his or her maximum. Gifted and talented students must be recognized as having special needs which won't be satisfied by solving the same old "apple" problems.

In Hicksville, we are embarking on a new and exciting adventure in the area of gifted and talented education. No one, including the superintendent, knows for certain what the final product will be. The program will emerge as a result of the sharing of ideas of professionals, parents, and interested citizens, in addition to accumulated research and pilot programs elsewhere. Two things are certain: we will all learn as a result of these combined efforts, and the gifted and talented students of Hicksville will be better off as a result of our efforts.

Wilber D. Hawkins
Superintendent

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[When appropriate, yellow reference materials are included immediately following the chapters to which they are applicable.]

FOREWORD

This handbook is the culmination of the efforts of a great number of people. My special thanks to our consultants, Dr. Roger Taylor and Dr. Susanne Richert, for their guidance; to all teachers, administrators, parents and community residents, who gave of their time and input to develop a successful program for our Hicksville students; to Mrs. Charlene Anci, as the Board of Education representative, who, with other board members, is seeking community understanding and support for our program; to Dr. Burke and the PTA parents, who assisted by organizing the four days of conferences at the Burns Avenue school and to Miss Hogan, Ms. Turk and Mrs. Anderson for the planning, typing and printing of this booklet.

The booklet has been written as a guide for the initial implementation of a Gifted Program. It looks mainly to the activities and decisions that must be made during the 1981-82 school year, and yet, it also gives a focus as to where the program should be a few years from now. It is written not as a professional document, but one that can be read and understood by parents and community members, as well as the professional staff. The intent is that all segments of the community can have the opportunity to understand our program and give input into its shape and direction.

Catherine J. Fenton
Assistant Superintendent
May 1981

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November 24 & 25, 1980 and/or March 31-April 1, 1981

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CHAPTER I

Philosophy & Rationale for a Gifted and Talented Program

PHILOSOPHY

The philosophy presented to the Hicksville Board of Education on September 9, 1980 is as follows:

The district philosophy affirms that all children be given every opportunity to develop to the extent of their ability. It accepts the premise that there are youngsters whose abilities and potential for accomplishment are so exceptional that they require a variety of special provisions to meet their educational needs. The desire is to provide appropriate stimulation for these students, while having them interact with their age peers during the school day. The ultimate goal is to develop within the students a quest for personal excellence as well as a sense of individual responsibility and commitment to the school, to the community, and to a changing society.

RATIONALE

The reasons for creating a gifted program for students in the Hicksville Public Schools are:

1. Gifted children as a group differ from others in learning ability; they learn faster and remember more, and they tend to think more deeply with and about what they learn.

2. Gifted students tend to have the potential to be advanced beyond the average, if given the opportunity to engage in differentiated activities.

3. The regular school curriculum cannot fulfill all the needs of the gifted child. Gifted children need more than enrichment.

4. An educational program can be designed to meet the needs of gifted students. To be effective, the program should be qualitatively different from the regular curriculum. It should incorporate analysis, synthesis and evaluative thinking skills. It should not be an accelerated duplication of the regular classroom curriculum.

5. Peer interaction of gifted students is essential. A gifted program with homogeneous grouping for giftedness is an alternative to the regular classroom program.

6. The gifted program could serve as a stimulus to changes in the district's curriculum. The program could supply a support system to help the classroom teacher further extend the learning capacity and anticipated social/emotional roles of all students.

CHAPTER II

Goals and Objectives of a Program

GOALS AND OBJECTIVES OF THE GIFTED PROGRAM

Goals

A special program for the gifted should provide a unique learning environment for students of high potential whose giftedness creates a special educational need. The program should provide a wealth of materials and educational experiences which will allow students to develop high level cognitive, affective and psychomotor skills. It should also allow and encourage students to express themselves in creative ways through individual contributions and projects.

To further these goals:

- Each student will be encouraged to pursue interests which will foster creativity as well as technical skills in the interest area.
- Each student will be helped to realize his own unique potential.
- Each student will be provided guidance which will foster his personal integrity and a feeling of self-worth.

Objectives

The Hicksville Public School District has been guided by the following specific objectives for its program for the highly gifted student:

- To establish homogeneous groups of gifted peers.
- To discover the extent to which students who qualify for the program are reaching their potential.
- To identify the educational methods which will help gifted students achieve the best education possible in accordance with their ability.
- To establish an interdisciplinary approach to developing a student's interests.
- To find and solve problems that tend to interfere with personal adjustment to academic/social/emotional situations.
- To provide broader and more varied learning experiences.
- To utilize community resource personnel more extensively and to extend the fields of learning for these students (not to be initiated in 1981).

Procedures and Methods Used to Attain Goals and Objectives

A specialized, flexible and more individualized curriculum will be provided for gifted students by using new approaches and teaching techniques geared to meet their unique needs. Incorporated into the team-teaching, interdisciplinary program are the following:

Teaching Techniques

- To insure competence in basic skills and knowledge, the results of a standardized achievement test are analyzed for remedial work in any specific area.
- Individual fields of interest are explored with guidance from an advisor. The advisor may be the teacher or a specialist in a particular field.
- Broad areas of learning in several subject fields are undertaken.
- Special training and encouragement in the communication skills, both creative and functional, are stressed.
- Critical analysis and logic are emphasized.
- Competence in research skills is taught as a tool for in-depth learning.
- Experiences that promote appreciation of the cultural aspects of society are provided.
- The talents of school and community resource personnel are utilized when possible.
- Provisions are made for educational trips of a scientific and/or a cultural nature when appropriate.
- Individualization of instruction is provided based on student interests and needs.

Teaching Emphasis

- The emphasis is placed on teaching students rather than the teaching of a set curriculum.
- Emphasis is placed on quality of work rather than quantity.
- Respect for self and others is fundamental throughout the program.

Teaching Approach

The most practical way for a teacher to set up an individual or small-group study is to meet with the students concerned and set up the study together, using the interests of the students or introducing new topic possibilities.

At the elementary level, Hicksville teachers themselves and those in other schools that have gifted programs, have found that gifted students over the years express interest in learning more about the following topics:

Science

Botany
Animals
The ocean
Photography
Microscopes
Prehistoric life
Geology
The atom
Weather
Astronomy
Conservation
Biochemistry

Music

Famous composers
Schools of music
From other cultures
Role in Society
Economical impact
Trends
Components

Social Studies

Sociology
Latin America
Archaeology
Africa
Antarctica
Europe
Geography
United States History
Philosophy
Anthropology
Economics

Fine Arts

Famous artists
Schools of art
Art history
What is art?
Art and human nature
Techniques
Art and moods
Where is art going?
Sculpture
Dance
Drama
Film

Literature

Biographies
Poetry
Science fiction
Folklore
Mythology
What is a book?
How to write a story

These topics have come from experiences with students on all grade levels. The list is by no means complete; yet, almost every topic can be expanded to lead to an interdisciplinary instructional approach.

At the secondary level, the pool of interdisciplinary topics is broader and more eclectic. Some topics of interest for secondary gifted students are:

History/Anthropology/Paleontology

Egyptology/King Tut/ Codes
Philosophy
Cartography
Inventing

Environment/Ecology

Oceanography
Kitchen Chemistry
Microgardening

Communication/Creative Writing/Media

Photography
Cinematography
Literature/Folklore/Myths
Linguistics
Animal Intelligence
Newspaper

Peoples of the World

Man and His Problems
Man and The Machine
Man, Myths and Mores
Arts/Drawing/Pottery/
Woodworking
Health/Medicine

Futuristic

Science Fiction
Space
Astronomy
Architecture
Third World Nations
Aeronautics
Computer Programming

The curriculum back-up for some of the topics will be discussed in detail in another chapter.

CHAPTER III
Organization and Scheduling of a Program

ORGANIZATION AND SCHEDULING OF A PROGRAM

Introduction

Gifted children have always been in our schools, and sensitive teachers and administrators have always tried to encourage their individual growth. Therefore, in every school there already exists some educational option that, if modified, could be the beginning of a standard gifted program.

Under the consultative leadership of Dr. Suzanne Richert, members of the staff reviewed a listing of existing activities and resources within the district which seem to have the potential for modification into a Gifted and Talented program. The listing included:

1. Student involvement in community activities.
2. Internships/mentorships
3. Field trips
4. Use of parent/other resource persons
5. Independent study
6. Extracurricular activities
7. Homogeneous grouping
8. Magnet school, alternative school
9. School within a school
10. Mini-courses, seminars
11. Resource Rooms/Learning Centers
12. Libraries/laboratories
13. Counselors
14. Continuous progress
15. Early entrance to or exit from school, or grade skipping
16. The regular classroom

Many teachers added another area:

17. In-service training of classroom teachers.

Dr. Richert asked the teachers to rank order the selection of existing facilities which could most easily be adapted or modified into a Gifted and Talented program. Those options weighted as first, second and third priority were:

1. The modification of the regular classroom's instruction with in-service training.
2. The use of homogeneous grouping of gifted children who would receive differentiated instruction in either a resource room, learning center, library or laboratory.
3. The use of homogeneous grouping of gifted children who at the secondary level would receive differentiated instruction in either advanced courses or within the organizational concept of an alternative school or a school within a school.

Administrators concurred with the teachers' sense of priorities and redefined the teachers' input to establish a plan of action for the 1981-82 school year.

Elementary Program

In most elementary schools, a team of teachers--usually the Library-Media teacher and the Reading or Math teacher--would coordinate a program of differentiated instruction for gifted students. The grouping could be either K-2 and 3-6, or K-3 and 4-6, depending on the needs of a particular building. The Art, Speech, Physical Education, Foreign Language, Vocal and Instrumental Music teachers, guidance counselors and other classroom teachers would be available to the team leaders as resource personnel.

Initially, instruction would be for one hour; gradually it would increase to a full morning or full afternoon program of instruction.

Other team arrangements, besides the Library-Media and Reading or Math teachers, are feasible; so, the actual teaming will be the prerogative of each elementary building. Some alternatives were: the Library-Media Specialist with either the Music teacher, the Foreign Language teacher or the Art teacher.

The major criteria for teaming are:

1. That the two people can cooperate and work as a sharing and planning instructional unit;
2. That the two people have the personality or dispositional traits needed in order to work with gifted children;
3. That the two people have an interest in developing a new pattern for instructing children.

The fourth criterion is an administrative problem. It must be feasible to adjust the team leaders' schedules so that they can provide the needed two half-day time slots which would be allocated solely to gifted instruction and/or curriculum planning.

Secondary Program

Administrators and staff concurred that the needs of gifted children could be met by modifying the existing secondary program in the following manner:

Children could be grouped homogeneously on the criterion of giftedness and scheduled into three consecutive periods of either an English, Social Studies and Cultural Arts elective sequence; or a Math, Science and Humanities elective sequence. The fourth consecutive period could be lunch. Such a sequence of four periods provides the framework for a "school-within-a-school" concept of instruction. For part of the day, the gifted children are homogeneously grouped, and for part of the day they are heterogeneously grouped.

The main criteria for teaming teachers in content areas in the secondary are the same as for elementary except for one additional aspect. Secondary teachers should be certified within their content areas and dual certification would permit optimal flexibility. Hicksville is fortunate to have teachers already with dual certification in either Social Studies and English, or Math and Science.

CHAPTER IV
The Teacher: The Most Critical Component for a Successful Program

THE TEACHER:

THE MOST CRITICAL COMPONENT

FOR A

SUCCESSFUL PROGRAM

The key to the daily success of any program is the teacher. The Board of Education can set policy to create programs; administration can create organizational patterns and managerial routines and provide educational leadership to ensure the growth and development of a program; parents and community members can give financial and moral support; but the teacher is the most critical component for a successful program.

Dr. Roger Taylor, in his conference presentation, spoke of teaching styles which would enhance the educational potential of the gifted students. He recommended that a teacher rate himself/herself on a scale which ranges from "The Guide on the Side" to "The Sage on the Stage." An administrator seeking to select a teacher for gifted students should look for as many qualities as possible from "The Guide on the Side" of the rating scale. (See page IV.1 of the reference materials in this chapter).

For teachers who wonder if their teaching style is suited for instruction in a gifted program, it may be helpful to review the reference material. It contains checklists of teaching behaviors that foster educational growth in students who are gifted. The last entry is a Self-Evaluation Teacher Checklist for personnel involved in a program.

CHAPTER IV
The Teacher: The Most Critical Component for a Successful Program

Reference

CHAPTER IV

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REPRESENTATIVE CLASSROOM TEACHING STYLES
FOR TEACHERS WORKING WITH GIFTED CHILDREN

OR

"THE GUIDE ON THE SIDE" vs "THE SAGE ON THE STAGE"

Values About	Appropriate Teacher Roles "Guide on the Side"	Inappropriate Teacher Roles "Sage on the Stage"
Knowledge	Operates in a dialectial manner in presenting knowledge. Is open to new ideas and procedures. Uses pupil knowledge and competence in teaching. Presents multiple views and expects students to form their own preferred meanings. Rewards creative, divergent behavior of pupils.	Adopts a didactic and dogmatic approach to knowledge. Inhibits or punishes student observations, values, or conclusions different from his own, the textbook or other authority. Strives to have all pupils master the wisdom he prescribes for them. "There are two ways to do things: the right way and the wrong way."
My Position:	10 9 8 7 6 5 4 3 2 1	
Learning and the Learner	Views learning as an exciting and self-rewarding activity. Holds that learning how to inquire and problem solve is the primary goal of education. Recognizes that children have a natural inclination to learn; that they are curious, imaginative, skilled at creating knowledge from experience. Provides pupils with a rich environment and varied activities in his content area to stimulate further learning. This teacher teaches kids about content.	Views learning as unpleasant but necessary. Holds the memorization of information and mastery of conventional content to be the primary goal of education. Recognizes that children have to be forced to study and learn. Applies extrinsic rewards and punishments to force the pupil to learn prescribed content which is carefully laid out and precisely defined. This teacher must be on page #96 if it is Oct. 11th. This teacher teaches content to the kids.
My Position:	10 9 8 7 6 5 4 3 2 1	
The Purpose of Schooling	Views schools as being child-centered with his major responsibility for fostering the "will to learn." The teacher has power, competence and commitment in designing an environment rich in ideas, topics, and materials to stimulate and guide independent learning and success. Provides opportunities for students to identify and clarify their own goals,	Views school as being institutionally centered with his major responsibility to implement the policies and procedures of the principal, superintendent, or state department. The teacher has little power competence or interest in major decisions about instructional procedures, programs, or materials. Rather he oversees the learning of students in the

The Purpose of Schooling and the Teacher (cont'd.)	patterns, values, and routes within the broad outlines of institutional curriculum. Expects pupils to be directly involved in the establishment and maintenance of practices which govern learning activity in the classroom and school. The Master Teacher's purpose is to guide the intellectual and emotional development of each child to its fullest potential. The teacher's purposes is to make instructional decisions based on what is best for each child and not on: 1. What is easiest to administer. 2. What the janitor deems appropriate (the janitor works for the teacher, not vice-versa). 3. What Ms. Jones plans to teach next year (she's a professional, paid to teach each child at whatever level of instruction necessary). An air of loving and caring is clearly felt in the classroom and the teacher strives to maintain an "I'm O.K., You're O.K.," relationship with each child.	prescribed course of study. He does not encourage or allow pupils to question or become involved in establishing general school practices which govern learning activity in the classroom and school. The main purpose of school is to transmit pre-determined values, content, and behaviors and teach competition through comparison of individual strengths and weaknesses in the intellectual and physical growth of each child. The climate of the classroom is cold, with the teacher maintaining an aloof position with the students never becoming really known to them. The teacher constantly protects the "I'm O.K., but you're not until you get to be as knowledgeable and have as many degrees as I do," syndrome.

My Position:	10	9	8	7	6	5	4	3	2	1

Values About	Appropriate Student Roles	Inappropriate Student Roles
Knowledge	Questions the values, assumptions, observations and conclusions of authorities. Recognizes the utility of knowledge in solving problems. Selects and modifies the multiple ideas presented by teachers and authors to formulate his own meanings consistent with his experience and needs. Acquires basic content through process activities of inquiry and creative thinking. Cognitively functions most of the time at the analysis, synthesis, evaluation level. Uses content	Does not question even obvious points of confusion in the values, assumptions, logic and observations of the teacher or other authoritative sources of knowledge. Rather he credits such confusion to his own intellectual inadequacy. He rejects his own experience and feelings in favor of converging on the ideas of authoritative sources, i.e. teachers, textbooks, experts.

Knowledge (cont'd.)	fluency, flexibility, and elaboration to develop original ideas and concepts.

My Kids' Roles:	10	9	8	7	6	5	4	3	2	1

Values About	Appropriate Student Roles	Inappropriate Student Roles
Learning and the Learner	Pursues facts and information with zest about topics and problems he encounters. Organizes the information he obtains from teachers, other pupils, his own experience and other sources into inferences and hypothesis he can subsequently test and match to future experience. Enjoys learning and derives his pleasure intrinsically from the learning activity itself.	Does not enjoy learning and views it as difficult and a chore. Accepts the need to be forced to attend, "behave" and study. Derives his primary pleasure not from learning activity itself but from the rewards given by teachers. Rejects the leadership of other pupils in learning, seeking instead the teacher's direction.

My Kids' Roles:	10	9	8	7	6	5	4	3	2	1

The Purpose of Schooling	Is an active co-learner with the teacher. Selects many of his own topics, problems, and patterns of inquiry. Exhibits leadership and teaching in his areas of competence and interest. Seeks and accepts direction from the teacher and other pupils in areas where they are more competent than he. The purpose of school is to help the student to become the most fully actualized, happy, and productive person that he can become.	Passively carries out the activities prescribed by the teacher or school. Exhibits mediocre task commitment and performance. Has and seeks no major responsibility in planning the content topics, or patterns of his learning activities. Does not attempt to teach other pupils or accept instruction from other pupils in the classroom. The purpose of school is to get a diploma so he can get a better job, have more security, and acquire as much money as possible.

My Kids' Roles:	10	9	8	7	6	5	4	3	2	1

California State College, Dominguez Hills
Project on
Excellence in Education

RATING SCALE OF SIGNIFICANT BEHAVIORS IN TEACHERS OF THE GIFTED

Teacher: _____ Grade Level _____
Observer: _____ Length of Observation _____
Date _____ Subject(s) being taught _____
School _____

To the Rater: A minimum of 40 minutes should be used for each observation. Use every opportunity to examine folios of materials, files of children's products and other evidence, as well as teacher behavior, to confirm impressions.

Teaching Process	Seldom	Occasionally	Frequently
1. Utilizes specialized pupil interests constructively.			
a. students work in areas of interest	___	___	___
b. teacher capitalizes on student interest in classroom	___	___	___
2. Utilizes special talents and abilities of the student.			
a. students are involved in activities which display or include their special abilities and talents	___	___	___
b. Individualized materials are available for development of special talents and abilities	___	___	___
3. Encourages self-selection of materials.			
a. students have freedom to select materials at higher conceptual levels of difficulty.	___	___	___
b. Teacher encourages pupils to make own selections and decisions.	___	___	___
4. Makes classwork interesting through use of different sense media.			
a. teacher encourages effective pupil display, not teacher-made displays.	___	___	___
b. teacher uses maps, charts, TV, radio and/or films to augment or advance the quality of instruction.	___	___	___
5. Maintains or uses classroom resource center containing materials as appropriate advanced levels.			
a. learning resources are openly available to students	___	___	___
b. teacher serves as a resource to pupils.	___	___	___

	Seldom	Occasionally	Frequently
6. Clarifies classroom goals and purposes using broad concepts rather than detail.			
a. relates discussion to course objectives.	___	___	___
b. student's performance indicates understanding of course objectives.	___	___	___
7. Uses varied teaching strategies effectively.			
a. teacher is sensitive to students' responses, both verbal and non-verbal.			
1. teacher responds to visible cues in physical behavior of students.	___	___	___
2. teacher uses student verbal reactions to extend student insights and understandings.	___	___	___
8. Conducts group discussions skillfully.			
a. teacher withholds own ideas & conclusions	___	___	___
b. teacher encourages participation of students in discussions.	___	___	___
9. Selects questions that stimulate-higher-level thinking.			
a. questions encourage students to draw analogies and indicate relationships.	___	___	___
b. students are able to ask analytic questions	___	___	___
c. students generalize from concrete to abstract at advanced levels.	___	___	___
10. Utilizes synthesis & analysis in appropriate areas.			
a. teacher utilizes effectively inductive and deductive reasoning and is able to apply techniques in classroom.	___	___	___
b. teacher assists and/or encourages students to relate theory to practice.	___	___	___
11. Draws examples and explanations from various sources and related fields.			
a. interrelationships are emphasized by teacher and students.	___	___	___
12. Presents activities that challenge and stimulate the students.			
a. students are eager to work on activities.	___	___	___
b. teacher varies the kind of assignment to to learning abilities and interests of the students.	___	___	___
c. teacher emphasis is on broad ideas and not drill & rote memory activities.	___	___	___
13. Utilizes evaluation in various forms			
a. teacher helps students in self-evaluation and self-improvement.	___	___	___

	Seldom	Occas.	Frequ.
14. Encourages independent thinking, including difference of opinion.			
a. students are encouraged to examine thoroughly and accurately controversial issues.			
1. students compare and contrast different issues, using objective evidence.	___	___	___
15. Gives appropriate encouragement to pupils.			
a. teacher gives praise when deserved.	___	___	___
b. teacher makes students feel worthy.	___	___	___
c. teacher provides for recognition of outstanding creative and/or scholarly performance.	___	___	___
16. Understands and encourages student ideas.			
a. teacher encourages student to try new approaches.	___	___	___
b. teacher is tolerant of student's attempt to find solutions of problems.	___	___	___
c. teacher encourages "guesses" by students and facilitates evaluation of guesses by students.	___	___	___
d. teacher helps students to realize that research involves trial and error.			
1. students are encouraged to apply principles of scientific procedures.	___	___	___
TEACHER BACKGROUND			
17. Is unthreaten by own mistakes.			
a. teacher is undisturbed and unembarrassed by own mistakes or criticism of students.	___	___	___
18. Teacher displays enthusiasm and employs humor constructively.			
a. teacher is energetic and animated.	___	___	___
Summary Item:			
19. Demonstrates understanding of the educational implications of giftedness.			
a. teacher uses implications of characteristics in the classroom operation, selection of materials, schedules, and questions.	___	___	___

CHECKLIST FOR TEACHERS' SELF-EVALUATION

	0	1	2	3
Lesson Planning				
Clear knowledge of purposes, including level of content and intellectual behavior to be observed				
Many experiences with pupils so that they feel free to verbalize and utilize background (example: "When we read . . ., I thought that . . .")				
Provision for each child in the enrichment group to work on one or more individual projects related to the enrichment units				
Use of guiding questions at identified intellectual levels				
Opportunities for children to summarize and generalize				
Follow-up work (independent study) regularly offered				
Introduction of new, related opportunities for work at the learning centers				
Classroom Environment				
Social science center				
Informational pictures (on a bulletin board, in a file box, on a book rack, in a folder)				
Periodical file in upper grades				
Globe				
Long-range, problem-solving question				
Manipulative materials with assignment for independent work				
Realia (objects authentic to unit)				
Textbooks				
Single-copy books				
Construction work and organized materials				
System for independent work storage (folders in file, one large folder, card-file record)				
Science center				
Experimental materials and equipment				
Reports on science experiments				
Single-copy science materials (books, magazines, folders of information)				
Independent work in question form				
Science diagram				
System for organizing children's independent work (folders, files, and the like)				
Music center				
Collection of phonograph records				
Music books				
Music films, filmstrips, etc.				
Music sheets				
Long-range, problem-solving question				
Follow-up for independent study				
Art center				
File of artists' biographies for children who can read them				
Art prints for appreciation				

CHECKLIST FOR TEACHERS' SELF-EVALUATION—Continued

	0	1	2	3
Art center (Continued)				
Manipulative materials				
Organization of art work materials (paints, crayons, clay, brushes, paper, and the like)				
Question related to area of study				
Art books if children can read them				
Independent study questions with system for organizing children's work				
Mathematics center				
Textbooks and single-copy enrichment books				
Problems for independent study				
Manipulative materials (equipment for experimentation or measurement)				
Long-range, problem-solving question				
Language center				
Spelling materials				
Dictionaries and other appropriate reference books				
Typewriter				
Word drill materials				
Independent work on reading skills				
Collections of children's stories				
Environment reminders for teachers:				
Correlate one subject to another.				
Put all captions on the bottom of bulletin board area.				
Block all bulletin boards neatly, using strips of tagboard at ends of captions or pictures.				
Don't paste or tape anything on painted wall area.				
Any mobiles should be arranged in *one* uncrowded area.				
If bulletin board is large, use large picture or diagram.				
Have a variety of bulletin boards: children's work; diagrams (mathematics, science); informational pictures (social sciences); art prints; time lines; maps.				
Use cursive writing consistently (depending on grade level); show signs, labels, captions, writing examples of excellent quality.				
Use envelopes, file cards, or folders for organizing independent work in centers.				
Application of Theories				
Knowledge of specific theoretical structures				
Knowledge of how you have fulfilled the definition of enrichment:				
Learning environment (conducive to exploration and originality)				
Provision for individual differences				
Depth and scope of enrichment experiences				

CHECKLIST FOR TEACHERS' SELF-EVALUATION—Concluded

	0	1	2	3
Knowledge of how you have fulfilled the definition of enrichment: (Continued)				
Opportunities for children to do reflective thinking, problem solving, and critical thinking				
Opportunities for children to be creative				
Knowledge of how you have provided for attributes of the gifted, particularly for the following abilities:				
To work with abstract concepts				
To summarize and generalize				
To learn independently				
To work for an extended time span				
To interrelate learnings				
Appreciation of the fact that although the course of study is basic, "the ceiling is off" for children who are gifted				

CHAPTER V
Identification of Students for a Gifted and Talented Program

Definition of the Term: Gifted Children

Introduction:

Two definitions of "gifted children" are used in regulations for gifted educational reimbursement programs. One definition reflects the point of view of federal regulations. The other reflects state regulations. Meeting either's stipulations can qualify a district for funds.

The Hicksville advisory committee, under the guidance of Dr. Roger Taylor, considered use of the state definition which separates children into two categories: the gifted and the talented. Consideration was given to creating two programs in order to meet the needs of each group. Through the consultative leadership of Dr. Suzanne Richert, administrative members of the advisory committee decided to use the federal government's definition of giftedness. It permits the district to serve the needs of 20% of its student population; under the state concept, 5% of the gifted population would participate in one discrete program, with 15 to 20% of the talented students in another program. By using the federal definition, Hicksville can provide a richer and more varied program for its students.

Hicksville's Definition of Gifted Children

Gifted children are defined as those children who consistently excel, or show the potential to consistently excel to the extent they need and can profit from specially planned educational services in one or more of the following areas of human endeavor:

- General Intellectual Ability: The child who shows or has the potential to excel in general intellectual ability, and needs and can profit from specially planned educational services beyond those normally provided by the standard school program, is a candidate.

- Specific Academic Aptitude: A child with a specific academic aptitude is one who has an exceptional skill in a subject area to the degree that he/she needs and can profit from specially planned educational services beyond those normally provided by the standard school curriculum. The subject areas under consideration are: English, Social Studies, Mathematics, Science, Foreign Languages and Research Skills.

- Leadership Ability: The child possessing leadership ability is that child who consistently engages in divergent thinking that results in unconventional responses to conventional tasks, to the extent that he/she needs and can profit from specially planned educational services beyond those normally provided by the standard school program.

- Visual and Performing Arts Ability: The child possessing visual and performing arts ability is that child who, by his/her consistently outstanding aesthetic production in graphic arts, sculpture, music or dance, needs and can profit from specially planned edu-

cational services beyond those normally provided by the standard school program.

- Psychomotor Ability: The child possessing psychomotor ability is that child who consistently displays mechanical skills or athletic ability so exceptional to that of other children in the school, that he/she needs and can profit from specially planned educational services beyond those normally provided by the standard school programs.

Identification and Instruction of Gifted Children

Introduction:

The procedure to be used for identifying gifted students is probably one of the most difficult tasks in establishing a program. To start, the screening procedure eventually must be linked with an instructional program developed to fulfill the needs of the identified students. Therefore, the task is always two-fold: first, the identification of students; second, the selection of an educational option to meet the needs or fully develop the identified potential.

The procedure for the identification of gifted children will vary with each of the six characteristics: intellectual ability, specific academic aptitude, leadership, creative thinking, visual, performing and psychomotor abilities.

Objective tests, and nominations from teachers, parents and students will be used as a data base for selection.

Identification Procedure

Phase I - Nominations

The materials to be used to generate nominations for the gifted program will come from three sources:

1. Standardized Test Results;
2. Performance data from uniform checklists; and
3. Developmental data which is culled from interviews, case studies and biographical information.

The identification matrix, as it appears on the following page, lists to the left the six areas of giftedness to be developed. On top of the matrix are the three types of instruments used for data collection.

AN IDENTIFICATION MATRIX

	Standardized Test Data					Performance Data: Checklists, Scales					Developmental Data
	Intelligence	Achievement	Creative - Divergent Thinking	Aptitude	Grades	Demonstration of Skills	Teacher and/or Other School Personnel	Parent	Peer	Self	Case studies, anecdotes, biographical data and interviews with student and parent
General Intellectual Ability	o *			o *	o	o	o		o	o	*
Specific Academic Aptitude		o		o	o	o	o			o	*
Creative or Divergent Thinking			*			o	o	o	o	o	*
Leadership Ability						o	o	o	o	o	*
Visual and Performing Arts						o	o			o	*
Psychomotor Ability						o	o			o	*

* Data collected at Phase II in the selection of Gifted and Talented candidates.

The exact standardized tests are the Metropolitan Readiness Test for Grades 1 and 2, the Iowa Test of Basic Skills for Grades 3-8, and the Cognitive Abilities Test for an indication of aptitude, potential and intelligence.

For data on a student's actual performance in the six areas of giftedness, uniform checklists will be distributed to teachers, parents, peers and the students themselves. Copies of suggested checklists are presented in appendix A of this report. Appropriate checklists for each building will be selected by administrators and staff.

Phase II - Screening

The screening procedure will begin with an analysis of the data from standardized tests and performance checklists. The standardized test data will be rank-ordered and the teacher, parent and peer data will be weighted. The screening, through the use of a matrix, will permit the top twenty percent of the population to emerge.

The emerging students who will represent twenty percent of the school's population will undergo further screening to determine the students' needs.

Phase III - Selection of Students for Differentiated Curriculum Instruction

All students who are considered in the top twenty percent of the population for giftedness will be given the WISC-R test or the Stanford Binet test to re-confirm the students' potential and gain information on interests, learning modality strengths, and thinking styles. Students and parents will be interviewed to discuss the most appropriate education option for the child.

The program offerings may be:

1. To remain in the regular school program on grade level.
2. At the elementary level, to accelerate to the next level, while remaining in the regular school program. At the secondary level, to accelerate within a subject area.
3. To become a participant in the gifted program with an annual review of educational needs.

Appeal Board

A three-member appeal board, consisting of an assistant superintendent of elementary or secondary education, the Director of Pupil Personnel Services, and one guidance counselor, will make final determination if conflicts in student selection occur.

Teachers, principals and supervisors will not be on the final appeal board because of their involvement in the selection process at earlier stages.

CHAPTER V
Identification of Students for a Gifted and Talented Program

Reference

CHAPTER V

Reference Materials

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Teacher Checklists for Kindergarten

Name_____ Age_____ Birth Date_____

Directions: Please place an X in the space beside each question which BEST describes the pupil.

	Yes	No
A. Language		
1. The pupil is able to read.	____	____
2. The pupil understands his relationship in such words as up-down, top-bottom, big-little, far-near.	____	____
B. Psychomotor Abilities		
1. The pupil exhibits coordination by being able to bounce a ball or tie his shoelaces.	____	____
2. The pupil can complete the missing parts of an incomplete familiar picture by drawing the parts in their proper perspective.	____	____
C. Mathematics		
1. The pupil can repeat five digits forward and reversed.	____	____
2. The pupil recognizes and understands the value of coins (penny, nickel, dime, and quarter.)	____	____
D. Creativity		
1. The pupil interprets stories or pictures in his own words.	____	____
2. The pupil displays curiosity by asking many questions or by other types of behavior.	____	____
E. General Characteristics		
1. The pupil readily adapts to new situations; he is flexible in thought and action; he seems undisturbed when the normal routine is changed.	____	____
2. The pupil seeks new tasks and activities.	____	____
3. The pupil tends to dominate others and generally directs the activity in which he is involved.	____	____

* Taken and adapted from materials prepared for Dade County, Florida Public Schools, Mr. James Miley, Coordinator for the Gifted.

Checklist for First Grade Pupils

Name_____ Age_____ Date of Birth_____

Directions: Please place an X in the space beside each question which BEST describes the pupil.

	Yes	No
1. The pupil reads two years above grade level.	___	___
2. The pupil recognizes the number and sequences of steps in a specified direction.	___	___
3. The pupil forms sets and subsets.	___	___
4. The pupil understands the concepts of place value.	___	___
5. The pupil recognizes the properties of right angles.	___	___
6. The pupil can create a short story from a familiar subject.	___	___
7. The pupil interprets stories and pictures in his own words.	___	___
8. The pupil questions critically.	___	___
9. The pupil demonstrates flexibility in his thinking pattern and the ability to communicate to others.	___	___
10. The pupil is self-confident with pupils his own age, and/or adults; seems comfortable when asked to show his work to class.	___	___
11. The pupil has a well-developed vocabulary.	___	___
12. The pupil has a vivid imagination and enjoys sharing his "stories" with others.	___	___

* Taken and adapted from materials prepared for Dade County, Florida Public Schools, Mr. James Miley, Coordinator for the Gifted.

TEACHER NOMINATION FORM

CHARACTERISTICS OF G/T STUDENTS

A. Intellectually or Academically Gifted

1) Has vocabulary or knowledge in a specific area that is unusually advanced for age or grade.

2) Has knowledge about things of which other children are unaware.

3) Grasps concepts quickly, easily, without much repetition. *Bored with routine tasks and may refuse to do rote homework.*

4) Recognizes relationships and comprehends meanings. *May make jokes or puns at inappropriate times.*

5) Has unusual insight into values and relationships. *May perceive injustices and assertively oppose them.*

6) Asks more provocative questions about the causes and reasons for things. *May refuse to accept authority and be non-conforming.*

7) Evaluates facts, arguments, and persons critically. *May be self-critical, impatient or critical of self and others, including the teacher.*

8) Enthusiastically generates ideas or solution to problems and questions. *May dominate others because of abilities.*

9) Has intense, often diverse self-directed interests. *May be difficult to get involved in topics he/she is not interested in.*

10) Prefers to work independently. *May be highly individualistic and seem stubborn.*

Please nominate 3 to 5 students who consistently display several of these characteristics. Keep in mind some of the more "difficult" characteristics in italics.

_____

_____

_____

_____

_____

_____

Developed by E. Susanne Richert, Ph.D., EIC-South, N. J. Dept. of Ed.

TEACHER NOMINATION FORM

B. Gifted in Creative/Productive Thinking:

1) Produces many and varied solutions to problems.

2) Flexible. *Has high tolerance of disorder or ambiguity. May be impatient with details or restrictions.*

3) Is highly original, playful, imaginative. *Capable of fantasy, that is often sustained.*

4) Capacity for task commitment in areas of interest. *May resist working on projects he/she is not interested in. Bored with routine or repetitive tasks.*

5) Uses imagination and fantasy in solving personal and universal problems (i.e. an imaginary playmate, inventing cures for disease, poverty, solving energy crisis, etc.) *May be considered wild or silly by peers or teachers.*

6) Keen sense of humor and often perceives humor in situations others are unaware of. *May make jokes at inappropriate times.*

7) Takes intellectual and emotional risks in expressing or trying out original ideas. Does not fear being different. *May be viewed unrealistic "crazy" or too aggressive.*

8) Intense feelings and opinions that he/she may be uninhibited in expressing.

9) Prefers to work independently. *May be highly individualistic non-conforming and seem stubborn.*

10) Intensely curious about many things. *May interrupt or ignore class activities to pursue interests.*

11) Shows emotional and esthetic sensitivity.

Please nominate 3 to 5 students who consistently display several of these characteristics. Keep in mind some of the more "difficult" characteristics in italics.

_____

_____

_____

_____

_____

_____

Developed by E. Susanne Richert, Ph.D., EIC-South, N. J. Dept. of Ed.

TEACHER EVALUATIONS OF CREATIVITY

Teacher_____ Grade_____
School_____ Date_____

1. Which children in your class are the most fluent in the production of ideas? These are children who seem to be "just running over with ideas," though not always the most talkative. Some of their ideas may not be of high quality.

   1._____ 4._____
   2._____ 5._____
   3._____

   Which are the least fluent?

   1._____ 4._____
   2._____ 5._____
   3._____

2. Which children in your class are the most flexible in their thinking and in their thinking and in the production of ideas? When one plan or procedure fails, they come up immediately with a different approach. They employ a variety of strategies or approaches in solving problems. They readily abandon unproductive approaches although they do not abandon the goal; they simply find some other way of achieving the goal.

   1._____ 4._____
   2._____ 5._____
   3._____

   Which are the least flexible?

   1._____ 4._____
   2._____ 5._____
   3._____

3. Which children in your class are the most original in their thinking? They are able to get away from the obvious and the common-place and break away from the beaten path. They see relationships and think of ideas and solutions which are different from others in the class and from the textbook. Many, though not all, of their ideas prove to be useful. Some of their ideas are quite surprising, though true.

   1._____ 4._____
   2._____ 5._____
   3._____

   Which are the least original?

   1._____ 4._____
   2._____ 5._____
   3._____

4. Which children in your class are the best in elaborating ideas? They are able to take an idea or a task and spell out the detail. They can take a simple idea and "embroider" it or make it fancy and attractive. Their drawings are very detailed and they are able to develop very detailed or thorough plans for projects.

   1._____ 4._____
   2._____ 5._____
   3._____

   Which are least able to elaborate?

   1._____ 4._____
   2._____ 5._____
   3._____

Torrance Scoring Manual
for Torrance Test of
Creative Thinking

V.5

SCALE FOR RATING BEHAVIORAL CHARACTERISTICS OF SUPERIOR STUDENTS

Joseph S. Renzulli / Robert K. Hartman

Name _____ Date _____

School _____ Grade _____ Age _____
years months

Teacher or person completing this form _____

How long have you known this child? _____ months.

Directions. These scales are designed to obtain teacher estimates of a student's characteristics in the areas of learning, motivation, creativity, and leadership. The items are derived from the research literature dealing with characteristics of gifted and creative persons. It should be pointed out that a considerable amount of individual differences can be found within this population; and therefore, the profiles are likely to vary a great deal. Each item in the scales should be considered separately and should reflect the degree to which you have observed the presence or absence of each characteristic. Since the four dimensions of the instrument represent relatively different sets of behaviors, the scores obtained from the separate scales should not be summed to yield a total score. Please read the statements carefully and circle the appropriate number according to the following scale of values:

1. If you have seldom or never observed this characteristic.
2. If you have observed this characteristic occasionally.
3. If you have observed this characteristic to a considerable degree.
4. If you have observed this characteristic almost all of the time.

PART I: LEARNING CHARACTERISTICS

1. Has unusually advanced vocabulary for age or grade level; uses terms in a meaningful way; has verbal behavior characterized by "richness" of expression, elaboration, and fluency. 1 2 3 4

2. Possesses a large storehouse of information about a variety of topics (beyond the usual interests of youngsters his age). 1 2 3 4

3. Has quick mastery and recall of factual information.	1	2	3	4
4. Has rapid insight into cause-effect relationships; tries to discover the how and why of things; asks many provocative questions (as distinct from informational or factual questions); wants to know what makes things (or people) "tick".	1	2	3	4
5. Has a ready grasp of underlying principles and can quickly make valid generalizations about events, people, or things; looks for similarities and differences in events, people, and things.	1	2	3	4
6. Is a keen and alert observer; usually "sees more" or "gets more" out of a story, film, etc. than others.	1	2	3	4
7. Reads a great deal on his own; usually prefers adult level books; does not avoid difficult material; may show a preference for biography, autobiography, encyclopedias, and atlases.	1	2	3	4
8. Tries to understand complicated material by separating it into its respective parts; reasons things out for himself; sees logical and common sense answers.	1	2	3	4
Column Total	___	___	___	___
Weight	___	___	___	___
Weighted Column Total	___	___	___	___
Total			___	

PART II: MOTIVATIONAL CHARACTERISTICS

1. Becomes absorbed and truly involved in certain topics or problems; is persistent in seeking task completion. (It is sometimes difficult to get him to move on to another topic.)	1	2	3	4
2. Is easily bored with routine tasks.	1	2	3	4
3. Needs little external motivation to follow through in work that initially excites him.	1	2	3	4
4. Strives toward perfection; is self-critical; is not easily satisfied with his own speed or products.	1	2	3	4
5. Prefers to work independently; requires little direction from teachers.	1	2	3	4

6. Is interested in many "adult" problems such as religion, politics, sex, race--more than usual for age level.	1	2	3	4
7. Often is self-assertive (sometimes even aggressive); stubborn in his beliefs.	1	2	3	4
8. Likes to organize and bring structure to things, people, and situations.	1	2	3	4
9. Is quite concerned with right and wrong, good and bad; often evaluates and passes judgment on events, people, and things.	1	2	3	4
Column Total	___	___	___	___
Weight	___	___	___	___
Weighted Column Total	___	___	___	___
Total			___	

PART III: CREATIVITY CHARACTERISTICS

1. Displays a great deal of curiosity about many things; is constantly asking questions about anything and everything.	1	2	3	4
2. Generates a large number of ideas or solutions to problems and questions; often offers unusual ("way out"), unique, clever responses.	1	2	3	4
3. Is uninhibited in expressions of opinion; is sometimes radical and spirited in disagreement; is tenacious.	1	2	3	4
4. Is a high risk taker; is adventurous and speculative.	1	2	3	4
5. Displays a good deal of intellectual playfulness; fantasizes; imagines ("I wonder what would happen if...)"	1	2	3	4
6. Displays a keen sense of humor and sees humor in situations that may not appear to be humorous to others.	1	2	3	4
7. Is unusually aware of his impulses and more open to the irrational in himself (freer expression of feminine interest for boys, greater than usual amount of independence for girls); shows emotional sensitivity.	1	2	3	4
8. Is sensitive to beauty; attends to aesthetic characteristics of things.	1	2	3	4
9. Is nonconforming; accepts disorder; is not interested in details; is individualistic; does not fear being different.	1	2	3	4

10. Criticizes constructively; is unwilling to accept authoritarian pronouncements without critical examination.	1	2	3	4
Column Total	___	___	___	___
Weight	___	___	___	___
Weighted Column Total	___	___	___	___
Total			___	

PART IV: LEADERSHIP CHARACTERISTICS

1. Carries responsibility well; can be counted on to do what he has promised and usually does it well.	1	2	3	4
2. Is self-confident with children his own age as well as adults; seems comfortable when asked to show his work to the class.	1	2	3.	4
3. Seems to be well liked by his classmates.	1	2	3	4
4. Is cooperative with teacher and classmates; tends to avoid bickering and is generally easy to get along with.	1	2	3	4
5. Can express himself well; has good verbal facility and is usually well understood.	1	2	3	4
6. Adapts readily to new situations; is flexible in thought and action and does not seem disturbed when the normal routine is changed.	1	2	3	4
7. Seems to enjoy being around other people; is sociable and prefers not to be alone.	1	2	3	4
8. Tends to dominate others when they are around; generally directs the activity in which he is involved.	1	2	3	4
9. Participates in most social activities connected with the school; can be counted on to be there if anyone is.	1	2	3	4
10. Excels in athletic activities; is well coordinated and enjoys all sorts of athletic games.	1	2	3	4
Column Total	___	___	___	___
Weight	___	___	___	___
Weighted Column Total	___	___	___	___
Total			___	

Scoring. Separate scores for each of the three dimensions may be obtained as follows:

* Add the numbers circled in each column to obtain the "Column Total."

* Multiply the Column Total by the "Weight" for each column to obtain the "Weighted Column Total."

* Sum the Weighted Column Totals across to obtain the "Score" for each dimension of the scale.

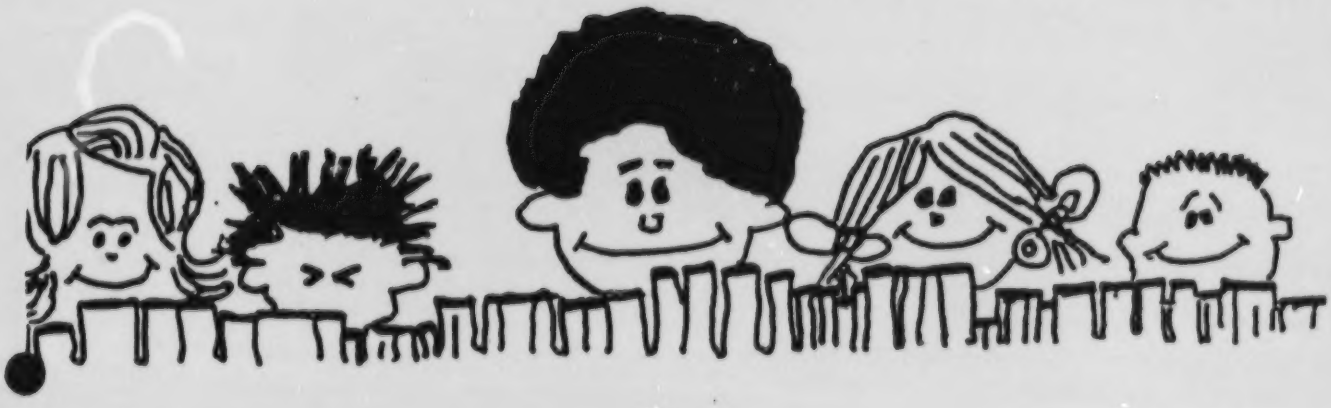
* Enter the Scores below.

Learning Characteristics ..... _____

Motivational Characteristics ..... _____

Creativity Characteristics ..... _____

Leadership Characteristics ..... _____



Worksheet for Identifying Scientific Talent

If a child can be described by all or part of any of the following statements, put the number of each characteristic which applies to him after his name.

1. Is clear and accurate in oral and written expression.
2. Reads above grade level materials.
3. Performs arithmetical operations above grade level.
4. Has good coordination.
5. Does more than the assignment.
6. Rises above the failures met in experimenting or making projects.
7. Wants to know the reasons and causes for things.
8. Engages in his own special projects spending much time and effort.
9. Reads much scientific material.
10. Appears to enjoy discussing scientific topics.

Pupil's Name	No. of the Characteristics	Remarks

Worksheet for Identifying Creative Thinking

If a child can be described by all or part of any of the following statements, put the number of each characteristic which applies to him after his name.

1. Curious about many things; constantly asking questions about everything and anything.
2. Has large number of ideas and solutions to problems; often offers unusual, unique, clever responses.
3. Is uninhibited in expressions or opinion; is sometimes radical; is tenacious.
4. Is a high risk taker, adventurous, speculative.
5. Displays intellectual playfulness, fantasizes, imagines, concerned with adapting, improving and modifying.
6. Shows emotional sensitivity
7. Has keen sense of humor and sees humor in situations others do not see.
8. Is sensitive to beauty.
9. Is nonconforming; accepts disorder, is not interested in details; is individualistic, does not fear being different.
10. Criticizes constructively, is unwilling to accept authoritarian pronouncements without critical examination.

Pupil's Name	No. of the Characteristic	Remarks

WORKSHEET FOR IDENTIFYING ARTISTIC TALENT

If a child can be described by all or part of any of the following statements, put the number of each characteristic which applies to him after his name.

1. Draws a variety of things (not just jets or horses or people)
2. Puts depth into pictures, plans pictures, and uses good proportion.
3. Takes art work seriously. Seems to find much satisfaction in it.
4. Shows originality. Draws things in ways no other children do.
5. Is willing to try out new materials and experiences.
6. Fills extra time with drawing and painting activities.
7. Uses art to express his own experiences, his own feelings.
8. Is interested in other people's art work. Can appreciate, criticize, and learn from others' work.
9. Likes to model with clay, carve soap, or work with other forms of three-dimensional art.

Pupil's Name	No. of the Characteristic	Remarks

Worksheet for Identifying Musical Ability

1. Has good coordination.
2. Has a good sense of rhythm.
3. Has excellent discrimination.
4. Understands musical symbols and relationships vividly.
5. Shows enjoyment of musical activities.
6. Performs with musical feeling.
7. Has a degree of tonal memory.
8. Responds readily to rhythm, melody, and harmony.
9. Plays one or more musical instruments well and/or sings well.
10. Makes up original tunes.

Pupil's Name	No. of the Characteristic	Remarks

V.14

Worksheet for Identifying Dramatic Ability

If a child can be described by all or part of any of the following statements, put the number of each characteristic which applies to him after his name.

1. Readily shifts into the role of another character, animal or object.
2. Shows interest in dramatic activities.
3. Uses voice to reflect changes of idea and mood.
4. Understands and portrays the conflict in the situation, when given the opportunity to act out a dramatic event.
5. Communicates feelings by means of facial expressions, gestures, and bodily movements.
6. Enjoys evoking emotional responses from listeners.
7. Shows unusual ability to dramatize feelings and experience.
8. Moves a dramatic situation to a climax and brings it to a well-timed conclusion when telling a story.
9. Gets a good deal of satisfaction and happiness from play-acting or dramatizing.
10. Writes original plays or makes up plays from stories.
11. Can imitate others; mimics people and animals.

Pupil's Name	No. of the Characteristic	Remarks

Worksheet for Identifying Psychomotor Ability

If a child can be described by all or part of any of the following statements, put the number of each characteristic which applies to him after his name.

1. Is energetic and seems to need considerable exercise to stay happy.
2. Enjoys participating in highly competitive games.
3. Is consistently outstanding in many kinds of competitive games.
4. Is one of the fastest runners in the class.
5. Is one of the best coordinated children in the class.
6. Likes outdoor sports, hiking, camping.
7. Is willing to spend much time practicing physical activities such as shooting baskets, playing tennis, passing a ball.

Pupil's Name	No. of the Characteristic	Remarks

Worksheet for Identifying Leadership Ability

If a child can be described by all or part of any of the following statements, put the number of each characteristic which applies to him after his name.

1. Is liked and respected by most of the members of the class.
2. Is able to influence others to work toward desirable goals.
3. Is able to influence others to work toward undesirable goals.
4. Can take charge of the group.
5. Can judge the abilities of other children and find a place for them in group activities.
6. Is able to figure out what is wrong with an activity and show others how to do it better.
7. Is often asked for ideas and suggestions.
8. Is looked to by others when something must be decided.
9. Seems to sense what others want and helps them to accomplish it.
10. Is a leader in several kinds of activities.
11. Enters into things with contagious enthusiasm.
12. Is elected to offices.

Pupil's Name	No. of the Characteristic	Remarks

V.17

Parent Nomination Form
At the
Early Childhood Level

Name of Student _____ Age_____

Address _____ School_____ Grade_____

Parent's Name _____

Instructions: In relationship to the typical child in your neighborhood, please circle a number for each item which best describes your child:
5 - has this trait to a high degree; 4 - has this trait more than the typical child; 3 - compares with typical child; 2 - has this trait less than the typical child; 1 - lacks this trait.

1.	Has advanced vocabulary, expresses himself/herself well	5	4	3	2	1
2.	Thinks quickly	5	4	3	2	1
3.	Recalls facts easily	5	4	3	2	1
4.	Wants to know how things work	5	4	3	2	1
5.	Is reading (before he started kindergarten)	5	4	3	2	1
6.	Puts unrelated ideas together in new and different ways	5	4	3	2	1
7.	Becomes bored easily	5	4	3	2	1
8.	Asks reasons why--questions almost everything	5	4	3	2	1
9.	Likes to be with older people and "grown-up" things	5	4	3	2	1
10.	Has a great deal of curiosity	5	4	3	2	1
11.	Is adventurous	5	4	3	2	1
12.	Has a good sense of humor	5	4	3	2	1
13.	Is impulsive, acts before he thinks	5	4	3	2	1
14.	Tends to dominate others if given the chance.	5	4	3	2	1
15.	Is persistent, sticks to a task	5	4	3	2	1
16.	Has good physical coordination and body control	5	4	3	2	1
17.	Is independent and self sufficient	5	4	3	2	1
18.	Is aware of his surroundings and what is going on around him.	5	4	3	2	1
19.	Has long attention span	5	4	3	2	1
20.	Wants to do things for himself early--example: dressing and feeding himself	5	4	3	2	1

One could substitute "yes" and "no" rather than use a continuum. This form could be used by parents to help select GT students entering kindergarten or grade one. The teacher could fill out the form near the end of the year. Information collected from both, when compared to standardized test instruments could be used by an LEA to validate the form.) Developed by staffs in the North Carolina Division for Exceptional Children, Gifted and Talented Section and Division of Research.

PARENT INVENTORY

NAME_____ DATE_____
SCHOOL_____ GRADE_____
BIRTHDATE_____

A. What special talents or skills does your child have?_____
_____
_____
Give examples of behavior that illustrate this._____
_____
_____

B. Check the following items as best describes your child as you see him or her.

	Little	Some	A Great Deal
1. Is alert beyond his years			
2. Likes school			
3. Has interests of older children or of adults in games and reading			
4. Sticks to a project once it is started			
5. Is observant			
6. Has lots of ideas to share			
7. Has many different ways of solving problems			
8. Is aware of problems others often do not see			
9. Uses unique and unusual ways of solving problems			
10. Wants to know how and why			
11. Likes to pretend			
12. Other children call him/her to initiate play activities			
13. Asks a lot of questions about a variety of subjects			
14. Is not concerned with details			
15. Enjoys and responds to beauty			
16. Is able to plan and organize activities			
17. Has above average coordination, agility and ability in organized games			
18. Often finds and corrects own mistakes			
19. Others seem to enjoy his/her company			
20. Makes up stories and has ideas that are unique			

PARENT INVENTORY (cont'd.)

	Little	Some	A Great Deal
21. Has a wide range of interests			
22. Gets other children to do what he/she wants			
23. Likes to play organized games and is good at them			
24. Enjoys other people and seeks them out			
25. Is able and willing to work with others			
26. Sets high standards for self			
27. Chooses difficult problems over simple ones			
28. Is able to laugh at himself (if necessary)			
29. Likes to do many things and participates whole-heartedly			
30. Likes to have his/her ideas known			

C. Reading interests (favorite type of books and/or titles of favorite books) _____

D. Favorite school subject _____

E. General attitude toward school _____

F. Favorite playtime, leisure time activity _____

G. Hobbies and special interests (collections, dancing, making models, swimming, singing, painting, cooking, sewing, drama, etc.) _____

H. What special lessons, training or learning opportunities does your child have outside of school _____

I. What are some of the influences at home or at school that may negatively influence your child's performance in school _____

J. What other things would you like us to know that would assist us in planning a program for your child _____

Information for Teachers to Accompany Parent Inventory

The following inventory is designed to get a variety of information from the parents of a child considered for the gifted program. Items pertinent to your program should be selected from the complete inventory.

On the checklist, the following items identify the different talent areas:

GENERAL INTELLIGENCE:	1, 2, 3, 5, 8, 10, 13, 16, 18, 21, 26, 27
CREATIVE THINKING:	6, 7, 9, 11, 14, 20, 28
LEADERSHIP:	12, 19, 22, 24, 25, 29, 30

LEADERSHIP ABILITY
SOCIOMETRIC TEST

The following sociometric test may help you to identify children with leadership abilities. It will give you information on which children in your class are judged by their classmates to be good leaders.

For children too young to read or write, the test may be administered orally. For older children, the test may be mimeographed and copies given to the children.

LOWER GRADES

WHICH ONES ARE LIKE THIS?

Ask the children some questions as you have a chance to talk to them individually.

1. Which children are most often asked to choose up sides in a game?
2. Which children suggest or invent new games to play?
3. Which children help explain how games are played to other children and get them to take part in games?

SCORING
Make a class roster and total the number of mentions each child receives.

UPPER GRADES

WHICH ONES ARE LIKE THIS?

Here are some descriptions of boys and girls. Read each description carefully and ask yourself: "Which boys and girls in our group are like this?" Think about the boys and girls in your group to find the ones that fit each description. Under each question write the names of as many boys and girls as you think fit the description. Do not write your own name under any of the questions and do not sign your name at the top of the paper.

1. Who are the ones that seem to understand things most easily, out of school and in school?
2. Who are the good leaders? They are the leaders in several activities.
3. Who are the ones that are chosen captains of teams by the other children.
4. Who are the ones that can direct other children on a project and get them to work together without hurting anyone's feelings?
5. Who are the ones that are asked by the other children to settle arguments about rules in games?
6. Who are the ones that are most enthusiastic when starting or working on new projects and help to carry them through?

Make a class roster and total the number of mentions each child receives.

Peer Identification - Creativity - Elementary

Pretend our class found a puppy on the playground.

A. Which three students would be most likely to think up lots of names for the puppy?

1._____ 2._____ 3._____

Which three would make up the most unusual names?

1._____ 2._____ 3._____

Which three would think of names no one else would think of?

1._____ 2._____ 3._____

Which three probably would come up with the name we would finally decide on?

1._____ 2._____ 3._____

B. Which three students would be most likely to write a story about the puppy?

1._____ 2._____ 3._____

C. Which three students would probably think up different ways to teach the puppy a trick?

1._____ 2._____ 3._____

D. If we design a collar for our puppy, which three students would probably come up with the most designs for a collar?

1. _____ 2._____ 3._____

The fanciest collar?

1. _____ 2._____ 3._____

The most unusual collar?

1._____ 2._____ 3._____

E. Which three students would make the most suggestions of what could be done with the puppy?

1._____ 2._____ 3._____

F. Which three would give the teacher the most reasons for allowing the dog to come into the classroom?

1._____ 2._____ 3._____

Peer Identification - Creativity - Secondary

Think about the students in our class. Answer the following questions as completely as possible.

Which three students are the most curious about many things?

1._____ 2._____ 3._____

have the most ideas and solutions to problems?

1._____ 2._____ 3._____

don't seem to care what others think about what they say?

1._____ 2._____ 3._____

like to take chances?

1._____ 2._____ 3._____

have the most fun imagining about situations and things?

1._____ 2._____ 3._____

are most sensitive to the feelings and concerns of others?

1._____ 2._____ 3._____

have the best sense of humor?

1._____ 2._____ 3._____

are aware of and enjoy beautiful things?

1._____ 2._____ 3._____

are not concerned with details?

1._____ 2._____ 3._____

do not care if others think of them as being different?

1._____ 2._____ 3._____

are real individuals?

1._____ 2._____ 3._____

are apt to question authority?

1._____ 2._____ 3._____

A STUDENT LOOKS AT HIMSELF

Please show whether you agree or disagree with each of the statements by marking one of the spaces.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. I am a good athlete.				
2. I am a good student.				
3. I am popular with other students.				
4. I am one who understands and accepts other people.				
5. I am very sociable and know how to get along with other people.				
6. Other people recognize that I am an intelligent person.				
7. I am warm and understanding.				
8. I am easy to get along with				
9. I enjoy working with mechanical and scientific things.				
10. I enjoy abstract or mathematical problems.				
11. I am one who likes to work independently on special projects.				
12. I enjoy debating or discussing an idea.				
13. I enjoy "losing myself" in a good book or in imagination.				
14. I have a good sense of humor.				
15. My work is often quite original.				
16. I am able to come up with a large number of ideas or solutions to problems.				
17. I am able to take charge of planning a project.				
18. I don't mind being different from other people.				
19. I like to study subjects that are challenging or even difficult.				
20. I often use music, art, or drama to express my feelings.				
21. I don't like to accept what someone else says without challenging it.				
22. I feel strongly about things and often express my feelings, even if I think others will disagree.				

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A STUDENT LOOKS AT HIMSELF (cont'd.)

	Strongly Agree	Agree	Disagree	Strongly Disagree
23. I spend more time than I would need to on assignments because I enjoy the learning.				

24. Here are six areas of talent. In which area do you see yourself as being most talented? Rank them as you see them applying to your abilities. (1) First talent area, (2) Second talent area, etc.

_____ General intellectual ability.

_____ Specific academic aptitude (in one subject area, such as science, math, etc.)

_____ Creative Thinking.

_____ Leadership Ability.

_____ Visual and performing arts.

_____ Psychomotor ability (such as mechanical skills or athletic ability).

Class Summary Sheet
Gifted and Talented

Teacher _____ Date _____

School _____ Grade _____

Student's Name	Intellectual	Academic (Specify)	Leadership	Creative Thinking	Visual Performing Arts(Specify)	Psychomotor

V.27

GENERAL SCREENING QUESTIONNAIRE FOR GIFTED AND TALENTED

Teacher _____ Level _____ Date _____

Compare the students in your class. List below the three students who display the greatest amount of talent or ability in each area.

Intelligence	1_____	2_____	3_____
Creativity	1_____	2_____	3_____
Positive Self-Concept	1_____	2_____	3_____
Athletic Ability	1_____	2_____	3_____
Artistic Ability	1_____	2_____	3_____
Verbal Ability	1_____	2_____	3_____
Problem Solving Ability	1_____	2_____	3_____
Leadership Ability	1_____	2_____	3_____
Reading Ability	1_____	2_____	3_____
Math Ability	1_____	2_____	3_____
Knowledge	1_____	2_____	3_____
Motivation to Learn	1_____	2_____	3_____
Personality	1_____	2_____	3_____
Popularity	1_____	2_____	3_____
Initiative	1_____	2_____	3_____
Awareness of others	1_____	2_____	3_____
Science Aptitude	1_____	2_____	3_____

CASE STUDY FORMAT

SCREENING AND NOMINATION FORM

Pupil's name _____ Teacher _____

Birthdate _____ School _____

Grade _____ Date _____

Test Data

1. Academic Achievement Tests

Name	Results	Grade	Date

2. Group Ability Tests

Name	Results	Grade	Date

3. Individual Intelligence Tests

Name	Results	Grade	Date

4. Other Tests or Examinations

Name	Results	Grade	Date

Intellectual Functioning

Disregarding test results, would you rank this pupil in the upper 5 percent of his class in academic performance? In your opinion, is this child "mentally gifted"? Is classroom performance consistent with results of standardized tests?

Upper 5 percent?		"Mentally gifted"? (by state criteria)		Performance consistent with tests?	
Yes	No	Yes	No	Yes	No

Check the column which best describes the child's intellectual functioning. These items include a range of possible characteristics or objectives. A child is not expected to be high on all of them.

Item to be evaluated		Little 1	2	Moderate 3	4	Much 5
1. Knowledge and skills (Possesses a comfortable knowledge of basic skills and factual information)						
2. Concentration (Has ability to concentrate; is not easily distracted)						
3. Enjoyment of school (Enjoys academic pursuits and assignments; likes school)						
4. Persistence (Has the ability and desire to follow through on work; concerned with completion; able to see a problem through)	In own interests					
	In assigned tasks					
5. Responsiveness (Is easily motivated; responsive to adult suggestions and questions)						
6. Intellectual curiosity (Pursues interests primarily to understand or satisfy curiosity; questions the common, ordinary, or the unusual; wants to know how and why; generates questions of his own, in connection with personal interests or group concerns)						
7. Challenge (Enjoys the challenge of difficult problems, assignments, issues, and materials)						
8. Perceptiveness (Is alert, perceptive, and observant beyond his years; aware of many stimuli)						
9. Verbal facility (Shows marked facility with language; uses many words easily and accurately)						

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
10. Fluency of ideas (Produces a large number of ideas or products, often very quickly)					
11. Flexibility (Is able to approach ideas and problems from a number of perspectives; adaptable; able to find alternative ways of solving problems)					
12. Sensitivity to problems (Perceives and is aware of problems that others may not see; is ready to question or change existing situations and suggest improvements)					
13. Originality (Often uses original methods of solving problems, is able to combine ideas and materials in a number of ways, or creates products of unusual character or quality)					
14. Imagination (Can freely respond to stimuli with the production of mental images; may "play" with ideas or produce remote, fanciful associations or insights)					
15. Reasoning (Is logical, often generalizes or applies understanding in new situations, expands concepts into broader relationships, or sees parts in relation to the whole)					
16. Scientific method (Can define problems, formulate hypotheses, test ideas, and arrive at valid conclusions)					
17. Independence in thought (Inclined to follow his own organization and ideas rather than the structuring of others)					
18. Independence in action (Able to plan and organize activities, direct action, and evaluate results)					
19. Independence in work habits (Requires a minimum of adult direction and attention; possesses research skills to facilitate independent work)					
20. Elaboration (Concerned with detail and complexity; often involved with a variety of implications and consequences)					
21. Aesthetic appreciation (Enjoys and is responsive to beauty in the arts or nature)					

22. Describe any unpredictable behavior which interferes with study; e.g., wandering away from seat without apparent purpose:

23. Describe any unusual preoccupations such as "daydreaming" or "flights into fantasy" which lessen the pupil's learning efficiency:

24. Describe any learning characteristics which seem outstanding or would especially facilitate this child's progress in a challenging educational program:

25. Describe any learning difficulties the child might have in particular areas--difficulties which could hinder progress in such a program:

26. Describe any examples of the child's creative productivity:

The following list of subjects and activities is to be checked for (1) the child's apparent interest, judged by your observations of his classroom behavior; (2) performance, judged either by grades or quality of products or actions; and (3) the grade level at which the child seems capable of functioning.

Subject	Interest					Performance					Capability
	Little		Moderate		Much	Low		Average		High	
	1	2	3	4	5	1	2	3	4	5	Grade level
Art											
Construction or manipulation											
Dramatic expression											
Language arts											
Foreign language											
Handwriting											
Oral expression											
Reading											
Spelling											
Written expression											
Mathematics											
Music											
Physical activities											
Science											
Social science											

Comment on any intellectual characteristics you have observed which are not included in the preceding items:

_____

_____

_____

_____

_____

_____

_____

Physical Development

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
1. Physical expression (Indicates that physical activities are a comfortable, enjoyable area for self-expression)					
2. Physical ability (Coordination, timing, agility, and ability to participate satisfactorily in organized games)					
3. Energy level (Has available resources of pep and vigor for carrying on most activities)					
4. Physical appearance (Appears neat, well-groomed; has appropriate clothes for age and group)					

5. Check the spaces which best describe the child's physical build and posture as compared with the rest of the class:

Physical build:

Small stature _____

Medium build _____

More physically developed than most _____

Posture:

Good _____

Average _____

Poor _____

6. Describe any important aspect of the pupil's health or physical development which might affect participation in a challenging educational program:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Social Development

Check the column which best describes this child's social development.

Item to be evaluated		Little 1	2	Moderate 3	4	Much 5
1. Popularity (Others seem to enjoy and want to be with this child; frequently seen interacting with others in a social, friendly manner)	With same sex					
	With opposite sex					
2. Acceptance of others (Relates to others with genuine interest and concern; enjoys others; seeks them out; shows warmth)						
3. Status (Assumes public roles and leadership positions or enjoys considerable status in peer group)						
4. Social maturity (Able and willing to work with others; can "give and take"; is sensitive to the needs and feelings of others; shows consideration; observes rules of social conduct)						
5. Sense of humor (Ability to laugh at himself; gets enjoyment and pleasure from lighter moments in school day; laughs easily and comfortably)						
6. Sense of well-being (Seems self-confident, happy, and comfortable in most situations)						
7. Rapport with teacher (Two-way communication which seems to bring enjoyment to both child and teacher; relatively open and relaxed)						

8. Describe any characteristic of social behavior which you feel could interfere with this child's educational progress:

9. Comment upon the child's apparent capabilities for forming friendships and identifying with groups such as Boy Scouts, YMCA, and the like:

Emotional Development

Check the column which best describes this child's emotional development. Please note that a high score may not be desirable on all of the items which follow.

Item to be evaluated		Little 1	2	Moderate 3	4	Much 5
1. Emotional stability (Is able to cope with normal frustrations of living; adjusts to change with minimum of difficulty)						
2. Emotional control (Expresses and displays emotions appropriately; emotional outbursts rarely occur)						
3. Openness to experience (Appears to be receptive to new tasks or experiences; seems able to take reasonable risks; can respond naturally to unusual or unexpected stimuli)						
4. Enthusiasm (Enters into most activities with eagerness and wholehearted participation; maintains enthusiasm for duration of activity)						
5. Self-acceptance (Seems to understand and accept self; able to view self in terms of both limitations and abilities)						
6. Independence (Behavior usually is dictated by his own set of values; is concerned with the freedom to express ideas and feelings)						
7. Conformity (Behavior is influenced by expectancies and desires of others)	Influence of adults					
	Influence of peers					
8. Anxiety over achievement (Seems anxious about achievement; worried or concerned about schoolwork or the impression any performance makes on others)						
9. Competitiveness (Has high standards for performance, usually desiring to do as well or better than peers)						
10. Dominance (Asserts self with influence in a group situation)						
11. Aggressiveness (Acts with apparent intent to hurt others)						

12. Describe any emotional immaturity or other personality characteristic which could hinder this child's development:

_____

_____

_____

_____

_____

_____

_____

Teacher Recommendation

After this careful consideration of the child's intellectual, physical, social, and emotional development, do you think he or she could profit from participation in

_____?

Yes ____ No ____

Do you recommend that the child be placed in _____?

Yes ____ No ____

What reasoning have you used in making this decision? _____

_____

_____

_____

_____

In view of this case study record, check which type(s) of program(s) would be most appropriate for this pupil:

Enrichment in regular classes . . . . . _____

Courses by mail or special tutoring . . . . . _____

Advanced classes (acceleration) . . . . . _____

Attend college classes . . . . . _____

Special counseling or instruction outside of regular classes . . . . . _____

Special classes organized for gifted pupils . . . . . _____

What specific suggestions can you make for curriculum experiences and relationships which will meet this individual child's needs?

_____

_____

_____

_____

_____

_____

Signed: _____

Date _____ _____

CASE STUDY FORMAT

PARENT INVENTORY

Pupil's name _____ Date _____

School _____ Grade _____

Birthdate _____

1. Summary of Child's School Experience

Location	Dates	Grades	Age

2. Parental Background

Type of information	Father	Mother
Educational level completed		
Occupation		
Special interests and aptitudes		

3. Description of Family Unit (marital status, step-parents, other adults in home, and the like)

4. Significant Conditions or Stresses Which Might Influence School Performance

5. Description of Early Indications of Superior Ability (e.g., speech, interests, physical development)

6. Activities in Which Family Engages

Activity	Little	Moderate	Much
Taking trips			
Attending concerts			
Visiting museums			
Visiting art galleries			
Attending plays			
Picnicking			
Going to movies			
Visiting friends			
Attending lectures			
Camping			
Fishing			
Hunting			
Boating			
Swimming			
Other sports ( )			
Other activities ( )			

7. Describe any problems your child has had (e.g., speech, emotional, hearing):

8. Describe any important aspect of the pupil's health or physical development which might affect participation in a challenging educational program (serious illnesses or handicaps):

9. What special talents or skills do you feel your child has?

10. What examples can you give of your child's creative productivity? _____

_____

_____

_____

11. What are your child's vocational aspirations? _____

_____

_____

_____

12. What are your educational and vocational expectancies for your child? _____

_____

_____

_____

13. Child's reading interests (favorite books, type of book): _____

_____

_____

14. Reading materials available for child's use (e. g., encyclopedias, magazines): _____

_____

_____

_____

15. Amount of child's reading per week (estimate): _____

_____

16. What special lessons, training, or learning opportunities does your child have outside of school? _____

_____

_____

_____

17. Child's hobbies and special interests (e. g., collections, dancing, making models, swimming, singing, painting, cooking, sewing, drama): _____

_____

_____

_____

_____

18. Discuss your child's attitude toward school (e. g., activities enjoyed or disliked, enthusiasms, criticisms, relations to adults): _____

19. What kinds of development do you feel are most important for your child? _____

20. What suggestions can you give for meeting your child's needs in school? _____

Check the following items from 1 (little) to 5 (much) as best describes your child as you see him or her.

Item to be evaluated		Little 1	2	Moderate 3	4	Much 5
21. Enjoyment of school (Enjoys academic pursuits and assignments; likes school)						
22. Persistence (Ability and desire to follow through on work; concern with completion; ability to see a problem through)	In own interests					
	In assigned tasks					
23. Intellectual curiosity (Pursues interests primarily to understand or satisfy curiosity; questions the common, ordinary, or the unusual; wants to know how and why; generates questions of his own--in connection with personal interests or group concerns)						
24. Perceptiveness (Is alert, perceptive, and observant beyond his years; aware of many stimuli)						
25. Fluency (Produces a large number of ideas or products, often very quickly)						
26. Flexibility (Able to approach ideas and problems from a number of perspectives; adaptable; able to find alternative ways of solving problems)						
27. Sensitivity to problems (Perceives and is aware of problems and inconsistencies that others may not see; is ready to question or change existing situations and suggest improvements)						

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
28. Originality (Often uses original methods of solving problems, is able to combine ideas and materials in a number of ways, or creates products of unusual character or quality)					
29. Imagination (Can freely respond to stimuli with the production of mental images; may "play" with ideas or produce remote, fanciful associations or insights)					
30. Elaboration (Concerned with detail and complexity; often involved with a variety of implications and consequences)					
31. Aesthetic appreciation (Enjoys and is responsive to beauty in the arts or nature)					
32. Independence in thought (Inclined to follow his own organization and ideas rather than the structuring of others)					
33. Independence in action (Able to plan and organize activities, direct action, and evaluate results)					
34. Physical expression (Indicates that physical activities are a comfortable, enjoyable area for self-expression)					
35. Physical ability (Coordination, timing, agility, and ability to participate satisfactorily in organized games)					
36. Energy level (Has available resources of pep and vigor for carrying on most activities)					
37. Popularity (Others seem to enjoy and want to be with this child; frequently seen interacting with others in a social, friendly manner)					
38. Acceptance of others (Relates to others with genuine interest and concern; enjoys others; seeks them out; shows warmth)					
39. Social maturity (Able and willing to work with others; can "give and take"; is sensitive to the needs and feelings of others; shows consideration; observes rules of social conduct)					
40. Sense of humor (Ability to laugh at himself; gets enjoyment and pleasure from lighter moments in school day; laughs easily and comfortably)					
41. Happy qualities (Seems self-confident, happy, and comfortable in most situations; usually has a cheerful, pleased, or satisfied look on his face; does not seem to worry too much)					
42. Emotional stability (Is able to cope with normal frustrations of living; adjust to change with minimum of difficulty)					
43. Emotional control (Expresses and displays emotions)					

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
44. Enthusiasm (Appears enthusiastic about life, enters into most activities with eagerness and wholehearted participation)					
45. Self-acceptance (Seems to understand and accept self; able to view self in terms of both limitations and abilities)					
46. Independence (Behavior usually is dictated by his own set of values; is concerned with the freedom to express ideas and feelings)					
47. Dominance (Asserts self with influence in group situations)					
48. Aggressiveness (Frequently acts with apparent intent to hurt others)					

Parental Permission

School _____

Date _____

If you are in agreement with the recommendations made for your child, _____, and wish him/her to participate in the _____ Program, please sign below.

Signature _____

Reason for granting permission: _____

_____

_____

_____

_____

CASE STUDY FORMAT

ADDITIONAL RESOURCES AND INSTRUMENTS

Intellectual Processes Rating Scale[1]

Name _____ Birthdate _____ Grade _____

Teacher _____ District _____ Date _____

Rate each statement by putting an X in the appropriate square after the statement. The squares are numbered 1 to 5 and represent the degree to which you have noticed the described intellectual process. The bases for making a judgment are given as follows:

1. You have not noticed this process.
2. You have noticed this process to a slight degree.
3. You have noticed this process to a considerable degree.
4. You have noticed this process to a large degree.
5. You have noticed this process to a very large degree.

Intellectual Processes

Item to be evaluated	Rating scale 1	2	3	4	5
1. Cognition (The process of discovery, rediscovery, recognition, comprehension, and understanding)					
2. Memory (The retention of information in any form accumulated through in-school and out-of-school experiences)					
3. Convergent production (The production of information from given information where the emphasis is upon achieving conventionally accepted or best outcomes)					
4. Divergent production (The production of information from given information where the emphasis is upon a variety of ideas from the same source)					
5. Evaluation (To reach decisions or make judgments concerning the goodness--correctness, suitability, adequacy, desirability--of information in terms of criteria of identity consistency and goal satisfaction)					
Subtotals (number of Xs in each column)					
Total for all columns:					

[1] Adapted by Marcella Bonsall from J. P. Guilford and P. R. Merrifield, "The Structure of Intellect Model: Its Uses and Implications," Reports from the Psychological Laboratory, No. 24. Los Angeles: University of Southern California, April, 1960.

Rating Scale for Development of Intellectual Abilities and Skills[2]

Name _____ Birthdate _____ Grade _____

Teacher _____ District _____ Date _____

Rate each statement by putting an X in the appropriate square after the statement. The squares are numbered 1 to 5 and represent the degree to which you have noticed the described intellectual ability and skill. The bases for making a judgment are given as follows:

1. You have not noticed this intellectual ability and skill.
2. You have noticed this intellectual ability and skill to a slight degree.
3. You have noticed this intellectual ability and skill to a considerable degree.
4. You have noticed this intellectual ability and skill to a large degree.
5. You have noticed this intellectual ability and skill to a very large degree.

Intellectual Abilities and Skills

Item to be evaluated	Rating scale 1	2	3	4	5
1. Knowledge is finding in a task or problem the appropriate signals, cues, and clues which will bring out stored knowledge.					
a. Knowledge of specifics (To recall specific and isolable bits of information--very low level of abstraction)					
b. Knowledge of terminology (To know the referents most appropriate to a given use of specific verbal and nonverbal symbols)					
c. Knowledge of specific facts (To know dates, events, places, and the like, with precision or approximation)					
d. Knowledge of ways and means of dealing with specifics (To be aware of organizing, studying, judging, and criticizing patterns of organization)					
e. Knowledge of conventions (To be conscious of the characteristic way of treating and presenting ideas and phenomena)					
f. Knowledge of trends and sequences (To know the processes, directions, and movements of phenomena with respect to time)					

[2] Adapted by Marcella Bonsall from (1) Benjamin S. Bloom and D. R. Krathwohl, Taxonomy of Educational Objectives, 2 books. New York: David McKay Co., Inc., 1956, 1964; and (2) "Test-Item Folio No. 1" and Section III Appendices, Questions and Problems in Science. Princeton, N. J.: Educational Testing Service, 1956.

Intellectual Abilities and Skills (continued)

Item to be evaluated	Rating scale 1	2	3	4	5
g. Knowledge of classifications and categories (To know of the fundamental classes, sets, divisions, and arrangements of a purpose, a problem, and the like)					
h. Knowledge of criteria (To be aware of the criteria by which facts, principles, opinions, and conduct are tested or judged)					
i. Knowledge of methodology (To be aware of the methods of inquiry, techniques, and procedures employed in investigating phenomena)					
j. Knowledge of the universals and abstractions in a field (To know the major ideas, schemes, and patterns by which phenomena and ideas are organized--highest form of abstraction and complexity)					
k. Knowledge of principles and generalizations (To recognize the abstractions which are of value in explaining, describing, predicting, or determining the most relevant action or direction to be taken)					
l. Knowledge of theories and structures (To know the body of principles and generalizations together with their interrelations which present a clear, rounded, and systematic view of a complex field--most abstract formulations)					
2. Comprehension is knowing what is being communicated and using the idea even though not perceiving the fullest implications.					
a. Translation (To paraphrase, to render, or to alter the form of the original communication with accuracy)					
b. Interpretation (To explain or summarize the communication by reorganization or rearrangement)					
c. Extrapolations (To extend the given data to determine implications, consequences, corollaries, effects, and the like in accordance with the original communication)					
3. Analysis is breaking down a communication into its elements or parts to clarify the hierarchy or the relation of ideas.					
a. Analysis of elements (To distinguish between facts and hypotheses and to recognize unstated assumptions)					

Intellectual Abilities and Skills (continued)

Item to be evaluated	Rating scale 1	2	3	4	5
b. Analysis of relationships (To recognize the connections and interactions between elements and parts of a communication)					
c. Analysis of organizational principles (To recognize the form, pattern, and structure, both explicit and implicit, which make the communication a unit)					
4. Synthesis is putting together elements and parts into a whole pattern or structure not clearly there before.					
a. Production of a unique communication (To communicate ideas, feelings, and experiences of others)					
b. Production of a plan or proposed set of operations (To develop a plan of work or a proposal of a plan of operations that satisfies the requirements of the task)					
c. Derivation of a set of abstract relations (To develop a set of abstract relations either to classify or explain phenomena, or to deduce propositions or relations from a set of basic propositions or symbolic representatives)					
5. Evaluation is judging the value of purposes, ideas, methods, and the like, involving criteria as well as standards of appraisal.					
a. Judgments in terms of internal evidence (To evaluate the accuracy of a communication by the logical relationships evident in it)					
b. Judgments in terms of external criteria (To evaluate the material with reference to selected or remembered criteria)					
Subtotals (number of Xs in each column)					

Total for all columns . . . . . _____

Section totals					Final Total
Knowledge	Comprehension	Analysis	Synthesis	Evaluation	

CASE STUDY FORMAT

TEACHER AND PUPIL RATING SCALES

Teacher Rating

Pupil _____ Rated by _____

Grade _____ Date _____

Motivational Characteristics

Check the following items according to what best describes your observation of the child's motivation and satisfaction.

Characteristic to be evaluated	Little 1	2	Moderate 3	4	Much 5
Seeks to gain status socially					
Seeks to gain status academically					
Seeks to gain status athletically					
Seeks to gain affection from peers					
Seeks to gain affection from adults					
Finds satisfaction via peer relationships					
Finds satisfaction via adult relationships					
Finds satisfaction via popularity					
Finds satisfaction via being a good athlete					
Finds satisfaction via following own interests					
Finds satisfaction via being a good student					

Check the following activities according to your observations of the child's (1) enjoyment and (2) freedom of expression.

Activity	Enjoyment					Freedom of Expression				
	Little 1	2	Moderate 3	4	Much 5	Little 1	2	Moderate 3	4	Much 5
Writing										
Music										
Art										
Speaking										
Dance or physical activities										
Drama										
Construction or manipulation										
Other										

Pupil Rating

Name _____ Date _____

Subject Areas and Activities

Check (1) the column which best describes the amount of interest you have in the following subjects or activities; and (2) the level at which you feel you perform in each (judged either by grades or quality of products).

Subject areas and activities	Interest					Performance				
	Little		Moderate		Much	Low		Average		High
	1	2	3	4	5	1	2	3	4	5
Art										
Construction or manipulation (making things with hands)										
Dramatic expression (being in plays, acting)										
Language arts										
Foreign language										
Handwriting										
Oral expression (speaking)										
Spelling										
Reading										
Written expression (stories, poems, compositions)										
Mathematics										
Music										
Physical activities (sports, dance)										
Science										
Social science										

Check the following items for (1) the amount of enjoyment you feel with each activity; and (2) how free you feel about expressing yourself in each one.

Subject areas and activities		Enjoyment					Freedom of Expression				
		Little		Moderate		Much	Little		Moderate		Much
		1	2	3	4	5	1	2	3	4	5
Writing											
Music	Singing										
	Instrument										
Art											
Speaking											
Dance or Physical activities											
Drama (acting, being in plays)											
Construction or manipulation (making things with hands)											
Other activities you enjoy											

Pupil Inventory

Pupil's name _____

Date _____

1. Feelings about being in special educational program	
2. Areas and skills which are easiest in school	
3. Areas and skills which are hardest in school	
4. Things enjoyed most	
5. Things not enjoyed (areas disliked or in which change is desired)	
6. Areas or activities in which greatest progress is felt	
7. Preference for working conditions (e.g., alone, with others, long periods, where)	
8. Sports and games (e.g., what activities, evaluation of progress, with whom)	
In school	
Out of school	
9. Use of free time (e.g., activities, with whom)	
At school	
At home	

10. Areas in which "creative" products and freedom of expression are especially enjoyed (e.g., writing, music, art, speaking, dance--physical, drama, construction--manipulative)	
11. Hobbies and favorite recreation	
12. Lessons out of school--special opportunities	
13. Television habits	
Types of programs preferred	
Frequency of viewing	
14. Reading habits	
Kinds of materials preferred	
Amount of time spent	
15. Special responsibilities or jobs out of school	
16. Clubs and organizations (e.g., special friends who belong, activity leadership role, offices held or desired)	
17. Activities in which family participates as a group	
18. Possible vocational choices	
19. Educational ambitions	
20. Possible goals for the year	
21. Problems encountered	

CHAPTER VI

Curriculum for a Gifted and Talented Program

CURRICULUM

FOR A

GIFTED AND TALENTED PROGRAM

Gifted children need a differentiated curriculum: different in cognitive level of thought, different in content, different in approach and different in motivation. The outstanding characteristics of the curriculum should be:

1. The content should be issue- or problem-oriented in order to elicit thought at the higher levels of Bloom's Taxonomy, especially analysis, synthesis and evaluation.

2. The content should be inter-disciplinary, drawing insights and information from as many disciplines as possible.

3. The completion of a task is important; yet, the process which should be open-ended and involve some risk-taking is essential to the social and emotional development of the student.

4. The student's interest is the key to content selection. Creativity is a personal trait based on inner feelings, insights, and analytic thought. To be productive and effective, a student must be the one who selects the area of study.

Initially, a teacher of gifted children will have to learn the techniques which will vary somewhat from regular teaching: (1) the criteria for the selection of learning materials is different, and (2) questions posed to stimulate interest and give direction and guidance in tasks will be at the full range of Bloom's Taxonomy.

The criteria for the selection of learning materials should be as follows:

1. It provides for multiple levels of response:
   a. All levels of Bloom's taxonomy, especially analysis, synthesis, and evaluation
   b. Critical thinking
   c. Divergent production
   d. Logical thinking and problem solving
   e. Research methodology
   f. Communication skills

2. Materials are oriented toward issue or problem

3. Exercises provide opportunity for exploration

4. Exercises foster interaction with others rather than passive, loner-type work.

5. Fosters drawing from personalized experience

6. Student independence from teacher

7. Resource materials available to teacher from Library-Media Center to assist covering contents in depth and for further exploration of topic

8. Projects lead to community interaction and involvement.

The pattern of questions between teachers, pupils and peers should be consciously controlled to stimulate thought over the widest range of intellectual interaction.

The following is a listing of the types of questions asked in a classroom and characterized according to Bloom's Taxonomy:

1. Memory - recognizing or recalling information as given in the passage. Sanders distinguishes four kinds of ideas on the memory level of thinking:
   (a) Facts -
   Who did _____?
   When did_____?
   How many_____?
   What are_____?

   (b) Definitions of terms used, and perhaps explained, in the text
   What is meant by _____?
   What does _____mean?
   What meaning did you understand for_____?
   Define _____.
   Explain what we mean by_____.

   (c) Generalizations - recognizing common characteristic of a group of ideas or things -
   What events led to_____?
   In what three ways do _____ resemble_____?
   How did _____ and _____ effect (cause) _____?

   (d) Values - a judgment of quality
   What is said about _____? Do you agree?
   What kind of a boy was _____?
   What did _____ do that you wouldn't?

2. Comprehension

   (a) Translations - expressing ideas in different form or language
   Tell me in your own words how _____
   What kind of a drawing could you make to illustrate _____?
   How could we restate _____?
   Could we make up a play to tell this story? How?
   What does the writer mean by the phrase _____?
   Write a story pretending you are _____.

(b) Interpretation - trying to see relationships among facts, generalizations, values, etc. Sanders recognized several types of interpretation

(1) Comparative - are ideas the same, different, related or opposed
How is _____ like _____?
Is _____ the same as _____? Why not?
Which three _____ are most alike in _____?
Compare _____ with _____ in _____.
How does _____ today resemble _____ in _____?

(2) Implications - arriving at an idea which depends upon evidence in the reading passage
What will _____ and _____ lead to?
What justification for _____ does the author give?
If _____ continues to _____, what is likely to happen?
What would happen if _____?

(3) Inductive thinking - applying a generalization to a group of observed facts
What facts in the story tend to support the idea that _____?
What is the author trying to tell you by _____?
What does the behavior of _____ tell you about him?
What events led to _____? Why?

(4) Quantitative - using a number of facts to reach a conclusion
How much has _____ increased?
What conclusions can you draw from the table (graph)?
How many times did _____ do _____? Then what happened?
How many causes of _____ can you list?

(5) Cause and effect - recognizing the events leading up to a happening
Why did the boy _____?
How did the boy make _____ happen?
What two things led up to _____?
When the girl _____, what had to happen?
Why did _____ happen?

3. Application - solving a problem that requires the use of generalizations, facts, values and other appropriate types of thinking

How can we show that we need a traffic policeman at the crossing at the south end of our school?
If we want to raise hamsters in our classroom, what sort of plans will we have to make?
John has been ill for several days. What could we do to help him during his illness, to show him we think of him?

4. Analysis - recognizing and applying rules of logic to solution of a problem; analyzing an example of reasoning.

Discuss the statement, "All teachers are kind and friendly."
Some people think that boys can run faster than girls.
John was once bitten by a dog. Now John dislikes all dogs. Is he right or wrong in his feelings? Why?

5. Synthesis - using original, creative thinking to solve a problem -
   What other titles could you think of for this story?
   What other ending can you think of for this story?
   If John had not ____, what might have happened?
   Pretend you are a manufacturer of pencils who wishes to produce a much better pencil. Tell what you might do.

6. Evaluation - making judgments based on clearly defined standards -
   Did you enjoy the story of _____? For what reasons?
   What do you think of _____ in this story?
   Do you approve of his actions?
   In the textbook, the author tells us that _____ for _____.
   Is this a fact or the author's opinion? How do you know?
   This story has a very happy ending. Should all stories end happily? Why not?
   The author of our textbook apparently believes that the American colonists were right in their actions. Do you agree? What do you suppose the British said about the colonists?
   Write a short story about your favorite person in history. Tell why this person is your favorite.

The resources of Library-Media center will be a vital service for teachers of gifted children. The Library-Media specialist will have to organize numerous bibliographical materials for the various interest areas for students and will have to organize audio-visual materials within the school district and coordinate the sue of materials with the local library, museums and other community resources. A committee, under the direction of Dr. Daniel Salmon, Assistant Superintendent--Secondary, is considering the coordination and use of micro-computers to assist in the task sometime in the future.

A sample of bibliography of books available for gifted children for independent research is in Chapter IV reference material. Such a listing will be invaluable information in a data bank, computerized to assist students in doing thorough and extensive research.

Before individual teachers or teams of teachers can be comfortable with the creation of their own curriculum materials, they may prefer to use materials tested by others. Three organizations--the Institute for Political and Legal Education, the Institute for Creative Education, and Project Learning Tree--have developed extensive materials and techniques for instructing children using an inter-disciplinary approach. All three programs are funded through ESEA, Title IV-C; therefore, the materials are free of copyright laws. Teacher in-service training in the use of materials is vital since the teaching strategies are as important as the printed materials.

Chapter IV reference materials contain unit lessons from grades K-12, using both a single subject matter and inter-disciplinary approach. There are extensive samples of materials from the Institute of Creative Education and Bev Milam's curriculum materials for grades 7-12. The last packet is samples from Project Learning Tree.

The materials have been included to act as instructional models for our own teachers in Hicksville. Administrators and their staff will decide on the curriculum package that best suits their students' and staffs' needs. Presently, in Kindergarten and First Grade, the Board of Education has approved the use of Project Exceptionally Ready as a curriculum guide for the district's youngest students. A sample of an inter-disciplinary unit has been included in the reference material as an informational item.

CHAPTER VI
Curriculum for a Gifted and Talented Program

Reference

CHAPTER VI

Reference Materials

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Institute for Creative Education (IPLE)	
Elementary Curriculum	VI.38
Secondary Curriculum	VI.65
Teaching the Gifted and the Talented - Bev Milam	
Secondary Curriculum	VI.90
Institute for Political and Legal Education	VI.130
Project Learning Tree	
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CULTURAL ARTS

Art

Great Artists of America -- Freedgood
Famous Paintings -- Chase
Louvre - Italian Paintings -- Bazin
First Book of Paintings -- Moore
Meanings and Wonder of Art -- Gettings
What is a Masterpiece? -- Willard
The Story of Painting for Young People -- Janson
History of Painting, The -- Collier's Encyclopedia
Marc Chagall

Drama

One Hundred Plays for Children -- Burack
The Complete Book of Children's Theater -- Howard
Plays, Drama Magazine for Young People

Music

Masters of Music -- Samachson
Modern Composers for Young People -- Burch
First Book of Music -- Norman
Music Box Book -- Skolsky
Famous Composers for Young People -- Burch
Invitation to Music -- Siegmeister
Music Tells the Tale -- Palmer
Royal Book of Ballet -- Goulden
The Wonderful World of Music -- Britten

LANGUAGE

Developing Dictionary Skills

Beginning Dictionary -- Thorndike and Barnhardt

How to Use Books and Libraries

Books, Libraries and You -- Boyd
Find It Yourself -- Scripture and Greer
The Story of Our Libraries -- Collier's Encyclopedia

Using the Thesaurus

Roget's International Thesaurus

Roots, Prefixes, and Suffixes

Words -- Ernst
American College Dictionary

Word Origin

Words - Ernst
More about Words -- Ernst
Picturesque Word Origins -- B. and C. Merriam Co.
First Book of Words -- Epstein
First Book of Mythology -- Elgin
First Book of Space Travel -- Bendick
American College Dictionary
Our Language: The Story of the Words We Use -- Lambert
Phrase and Word Origins -- Holt
Origin -- A Short Etymological Dictionary of Modern English -- Partridge
Words of Science -- Asimov

Mythology

Mythology -- Hamilton
First Book of Mythology -- Elgin
Golden Treasury of Myths and Legends -- White
Stories of the Norsemen -- Johnston

Poetry

Time for Poetry -- Arbuthnot
Favorite Poems Old and New -- Ferris
Magic Circle -- Untermeyer
Miracles -- Lewis
Reflections on a Gift of Watermelon Pickle -- Dunning
The Paths of Poetry - Untermeyer
The Birds and the Beasts Were There -- Cole

Poetry Sets of Miscellaneous Titles

The Sun is a Golden Earring -- Betting
The Big Golden Book of Poetry -- Werner
Sprints and Distances -- Morrison
The First Book of Short Verse -- Howard
Hailstones and Halibut Bones -- O'Neill
Words, Words, Words -- O'Neill
It Doesn't Always Have to Rhyme -- Merriam
There is No Rhyme for Silver -- Merriam
Oodles of Noodles -- Hymes
Poems to be Read Aloud -- McFerran
Limericks by Lear -- Lear
All the Silver Pennies -- Thompson
Oxford Book of Poetry for Children -- Blishen
Cricket in a Thicket -- Fisher
Piper, Pipe That Song Again - Poems selected by Nancy Larrick
Take a Number -- O'Neill

Sets of Newbery Award Books

Sets of Caldecott Award Books

Miscellaneous

Sound -- Baer
Skills in Spelling -- Prouse
Collier's Junior Classics
Doubleday Pictorial Library of Science: (Chemistry, Physics, Astronomy -- Bronowski
How Charts and Drawings Help Us -- Hackler
Perplexing Puzzles and Tantalizing Teasers -- Gardner
Push Back the Desks -- Cullum
Classroom Questions: What Kinds? Sanders

MATHEMATICS

Banks and Banking - Money

Treasure: Story of Money -- Buehr
What is Money? -- Wilcox
From Barter to Banking -- Wade

Wonderful World of Mathematics

Wonderful World of Mathematics -- Hogben
The Giant Golden Book of Mathematics -- Adler

How Other People Wrote Numerals

Numbers and Numerals -- Smith
Number Stories of Long Ago -- Smith

Adventures in Geometry

Fun with Figures -- Freeman
Adventures in Geometry
Ruler, Compass and Fun -- Marks
Story of Mathematics -- Ruchlis

Slide Rule

Understanding the Slide Rule (Pamphlet)

SCIENCE

Nature Study - Birds

All About Birds -- Lemmon
Biology of Birds -- Lanyon
Feathers and Flight -- Hylander
How to Know the Birds -- Peterson
Song and Garden Birds of North America -- Wetmore

Insects - Our Friends and Enemies

Adventure Book of Insects -- Gray
Insects Are Where You Find Them -- Tee-Van
Life of Insects, The -- Wigglesworth
Insects -- Bronillette
Insects on Parade -- Hylander
Man and Insects -- Newman

Nature Study - Animals

Animal Homes -- George Mason
Animal Tracks -- George Mason
Animal Weapons -- George Mason
Animal Clothing -- George Mason
Animal Tools -- George Mason
Animal Sounds -- George Mason
How Animals Tell Time -- Selsam
Animals & Their Ways -- Carthy
Zoos of the World -- Fisher

Bees

Life of Insects, The -- Wigglesworth
Insects Are Where You Find Them -- Tee-Van
Man and Insects -- Newman

From Swimmers to Hoppers

Pets from the Pond -- Buck

Between the Tides

Seashores -- Zim
Wild Folk at the Seashore -- Fenton
Adventure Book of Shells -- Evans
The Sea - Life Nature Library
The Community of Living Things: Fresh & Salt Water -- Cadbury

The Archaeologist

Buried Treasure of Archaeology, The -- Brennan
First Book of Archaeology -- Kubie
The Story of the Ice Age -- Ames
Wonderful World of Archaeology -- Jessup
Ikhnaton of Egypt (Pamphlet)
All About Archaeology -- White
Modern Discoveries in Archaeology -- Suggs
Great Archaeologist -- Daugherty
Calendars to the Past -- Baldwin
Archaeology -- Collier's Encyclopedia Educational Aid

The Study of the Microscope and Microbes

Through the Magnifying Glass - Schwartz
First Book of Microbes -- Lewis
Experiments with the Microscope -- Beeler and Branley
Lens Magic -- Rogers
Secret of Light -- Adler
How and Why Book of the Microscope -- Grosset

Prehistoric Animals

All Creatures Here Below -- Garland
First Book of Prehistoric Animals -- Dickinson
First Book of Stone Age Man -- Dickinson
Prehistoric World -- Fenton
World We Live In, The -- Life (periodical)
World We Live In and How It Came to Be, The -- Hartman
Prehistoric Animals -- Scheele
Wonderful World of Prehistoric Animals -- Swinton
The Story of the Ice Age -- Ames

Wonders of the Sea

Seashores -- Zim
The Sea -- Life Nature Library
The Sea Around Us -- Carson
Pets from the Pond -- Buck
Let's Read About Fishes -- Ware
The Community of Living Things in Fresh & Salt Water -- Cadbury
The Gulf Stream -- Brindze
Adventure Book of Shells -- Evans
Wild Folk at the Seashore -- Fenton
Science on the Shores and Banks -- Cooper

Geology -

Changing Surface of the Earth

The World We Live In - Life
Rocks, Rivers, and Changing Earth -- Schneider
What's Inside the Earth? -- Zim
Earth's Changing Surface (Unitext)
The World We Live In and How It Came To Be -- Hartman
The Story of the Ice Age -- Ames
The Crust of the Earth -- Clayton

The Study of Rocks and Minerals

Let's Read About Rocks and Minerals -- Ware
How to Know the Minerals and Rocks -- Pearl

Oceanography

All Creatures Here Below -- Garland
Exploring Under the Sea -- Hinton
The Sea - Life Nature Library -- Whale Primer -- Walker
The Sea Around Us -- Carson
World Beneath the Ocean -- Gaskell

Old World Archaeology

First Book of the Stone Age Man -- Dickinson
Life Long Ago -- The Egyptians -- Ochsenschlager
Secrets in the Dust -- Holder
The World of Prehistory (The Story of Man's Beginning) -- Baldwin
Ancient Ruins and Archaeology -- de Camp
Treasures of Yesterday (The Story of Archaeology) -- Garnett
The Story of the Ice Age -- Ames
Buried Treasure of Archaeology -- Brennan
Calendars of the Past -- Baldwin

Astronomy - Grade 6

Find the Constellation -- Rey
Fun with Astronomy -- Freeman
Stars for Sam -- Reed
Exploring the Planets -- Gallant
Exploring the Universe -- Gallant
Man Probes the Universe (The Story of Astronomy) -- Ronan
You and Space Neighbors -- Lewellen
Exploring by Satellite -- Branley
First Book of Space Travel -- Bendick
Stars, Men, and Atoms -- Haber

Botany - The Science of Plants

Plants: A Guide to Plant Hobbies -- Zim
Exploring Biology -- Smith
The Life of Plants -- Corner

Conservation - Living Things

Exploring Biology -- Smith
Living Mammals of the World -- Sanderson
Algae in Water -- Public Health Service Publication No. 657
Plants -- Zim
Whale Primer -- Walker

The New World Archaeology (Mayas, Aztecs, and Incas)

Captain Cortez Conquers Mexico -- Jo nson
Maya, Land of the Turkey and the Deer -- Von Hagen
Sun Kingdom of the Aztecs -- Von Hagen
People of the Sun -- Von Hagen
Finding Out About the Incas -- Burland
Gods, Graves and Scholars -- Ceram
Ancient Mayas -- Morley
Aztec, The -- Blecker
Among the Maya Ruins -- Sutton
Ancient Maya -- Burland
They Lived Like This in Ancient Peru -- Neurath and Worboys

Weather

1001 Questions Answered About the Weather -- Forester
(Teacher's Reference)
Real Book About the Weather -- Forester
Weather in Your Life -- Adler
Wonders of the Weather -- Antoine

The Atom

Our Friend the Atom -- Haber
Your World in Motion -- Barrow
Orbit - Picture Story of Force and Motion -- Ruchlis
Stars, Men and Atoms -- Haber

Animals of Latin America

The Wildlife of South America -- Shuttlesworth
Living Mammals of the World -- Sanderson
All About Birds -- Lemmon
Let's Read About Fishes -- Ware

Photography

First Book of Photography -- Hoke
First Book of Color -- Paschel
Lens Magic -- Rogers
Secret of Light -- Adler

SOCIAL STUDIES

Time in Your Life

Time in Your Life -- Adler

Cultural Living In Canada

Canada -- Wood
Canada - Young Grant of the North -- Leitch

Finding Our Way Around the World

Mapping the World -- Raisz
Steps in Map Reading -- Rand-McNally

National Parks

Wonders of Our National Parks -- Thomson
America's Wonderland -- National Geographic
National Parks -- Jensen
First Book of National Parks -- Lobenz
First Book of National Monuments -- Lobenz
National Parks of America -- Udall

Antarctica

Ice Island -- Frank
Antarctic World -- Euller
Defrosting Antarctic Secrets -- Francis
Captain James Cook (Pamphlets)
Roald Amundsen (Pamphlets)
Antarctica, Land of Frozen Time -- Caras
First Book of the Antarctic -- Icenhower

Greece and Rome

The Romans -- Dugan
The Golden Days of Greece -- Coolidge
Greece and Rome: Builders of Our World -- National Geographic

PROJECT EXCEPTIONALLY READY

SPACE UNIT

[@] Indicates Teacher Notes

Coventry, Rhode Island
May, 1977

ACTIVITIES FOR MOTIVATION

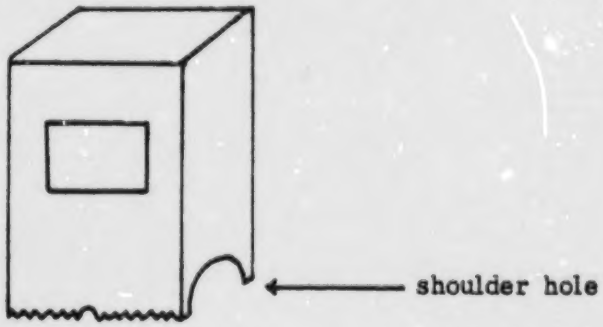
1. Build a rocket from boxes. [@A refrigerator box is fantastic.] Help the children measure and cut a hole for an entry. A window covered with blue cellophane gives a good "outer space effect". The whole class will enjoy painting the rocket. [@Let them be creative if they choose. After all, purple rockets with green dots are clearly visable in outer space. On the other hand, realism usually wins out if the issue is put to a vote. It helps for the children to discuss it and come up with a "painting plan". If the plan is written down on a rocket form on oak tag, the children may then paint the rocket according to the "pattern".]

2. The rocket needs equipment! An instrument panel can be built from all kinds of scraps. Old clock dials the children make themselves are fun. Factories are usually willing to give away scrap recyclable materials for this purpose. Having one "major design engineer" per day to work on the instrument panel and one or two assistants tends to eliminate some major battles over the panel and fosters group decision-making. [@In kindergarten this might be more true at the end of the year.]

3. Astronaut uniforms are a great success in the kindergarten Space Center. The uniforms are made from old sheets using a basic clown costume pattern (a Simplicity pattern). The elastic is eliminated from the sleeves and legs and flags are sewn on the shoulders. Large pockets are sewn on the front of the uniform. [@Have at least two uniforms available! Making uniforms is an activity which may be delegated to parent volunteers!]

4. The children can make fantastic helmets from paper bags. Cut a hole in the bag about the place where the child's face will be. Some children will be able to cut the hole themselves if you let them trace a square first. See if they can figure out where to put the square and

how to adjust for shoulders. Pipe cleaners and bendable straws may be used for antennae. [@Plastic, bendable notebook binding elements are realistic.] Oxygen tanks made from half gallon milk containers and string are a huge success! (Bleach bottles with the bottom removed and a hole cut for the face may also be used.)



5. Build a moon base using the same equipment as that needed for the rocket station. Helmets, etc. are still made. Giant Tinker Toys make a good base for the moon surface stabilizers on the rocket. The children design their lunar landscape. A lunar globe might be borrowed from an upper grade or middle school. A globe of the earth or a picture of the earth in the distance adds realism to the scene. The pictures are available for a small fee from NASA in Cape Kennedy, Florida. [@Children enjoy looking at actual photographs of rockets, astronauts, the earth, moon, etc. Both SVE (Society for Visual Education) and EBE (Encyclopaedia Brittanica Educational Corporation) have published excellent photographic sets in the area of space. In this unit these are displayed in the space corner, and are used to spark group discussion. They also form the base for a series of language "games". (See Language Section)]

LANGUAGE ACTIVITIES: GENERAL

1. Have the children dictate to the teacher or aide a simple list of the needs of the "builders" of each item for the Space Center. [@Include the materials needed for the rocket, the helmets, the instrument panels, etc. Write these lists on oak tag and keep them clipped to a coat hanger where children and teacher may refer to them when needed. It is helpful to make each list shortly before making a given item for the Space Center.]

2. Young children readily absorb the Space Vocabulary introduced in this unit. [@Many of them are already familiar with the terms used! For teachers who aren't there is a "Space Dictionary" included in the Teacher's Resource Section of this unit.] Some word cards to have available are listed below. (It is fun to show and discuss one or two each day and then to post these cards in the Mission Control area of the room.)

   astronaut, altitude, booster, burnout, capsule, Cosmonaut, crater, escape velocity, gravity, ground control, heat shield, ignition, instrument panel, launch, liftoff, mission control, module, orbit, oxygen, supply, propellant, re-entry, rendezvous, retro-rocket, spacecraft, splashdown, stage, thrust.

3. "Rocket Word Books or Rocket Cards"

   Let the children choose words from their stories to record in a rocket-shaped book or on rocket-shaped cards. [@Make two copies of each word - one for the word card or book and one for the bulletin board showing a procession of word rockets.]

4. Suggest a possible disaster aboard the space ship to the children and have each child dictate a sentence in a class book explaining how he would have handled the situation. [@When the book is completed, review each page with the children. Let each child volunteer to "read" his own answer. These books are fun to type up and send home to parents. Let each child practice his page before he takes the book home.]

Some possible disasters are:

1. One of the crew members is homesick and wants to turn the ship around and go back to earth.
2. Two astronauts get in a fight over who will step on the moon first.
3. One astronaut left his lucky coin at home and is quite upset!
4. One astronaut goes to sleep and refuses to help with the work. She says she just came along for the ride and wake her up when they reach the moon.
5. One astronaut says the food is terrible and refuses to eat.

5. "Report From the Moon"

Have astronauts make a report on their activities on the moon by coloring or painting pictures of what they "saw" or might have seen. [@Use language experience paper which has a blank space at the top for pictures.]

6. Take snapshots of the children building the rocket and the equipment. Let the children paste these in an album. Have them dictate a sentence for each picture. This album can then be shown by the children to any classroom visitors. [@If an inexpensive camera is available, children will enjoy taking the pictures themselves. Even if the photos are lop-sided and out of focus, the children will be proud of them!]

7. Read the following poem by Sara Teasdale. [@Write the poem on a chart and post it in the classroom.]

"The Falling Star"

I saw a star slide down the sky,
Blinding the north as it went by,
Too burning and too quick to hold,
Too lovely to be bought or sold
Good only to make wishes on
And the forever to be gone.

8. "When you wish upon a star..."

Write a wish book with the children. Allow each child a certain number of wishes and dictate these into a class book.

9. News Releases: This activity is a way to involve an older class with the kindergarten children for mutual benefit. Twice a week have two "reporters" from another class interview the kindergarten "Space Crew" concerning the status of the launch. Give the older children some lead questions for the interview such as:

   1. What problems are you having getting ready for the launch?

   2. What do you expect to find when you get there?

   3. Why are you making the trip?

   4. What problems do you think you might have on the trip? What might happen?

   The "reporters" can use a tape recorder with a microphone for the interviews and then write an article based on the children's responses. When the paper is published be sure to read the paper in class and send a copy home with each child! [@This is an excellent activity for local school publicity. Newspapers are usually interested in covering this kind of human interest story. Television stations will also get good footage with all the rocket paraphernalia, the astronauts, and the Space Center!]

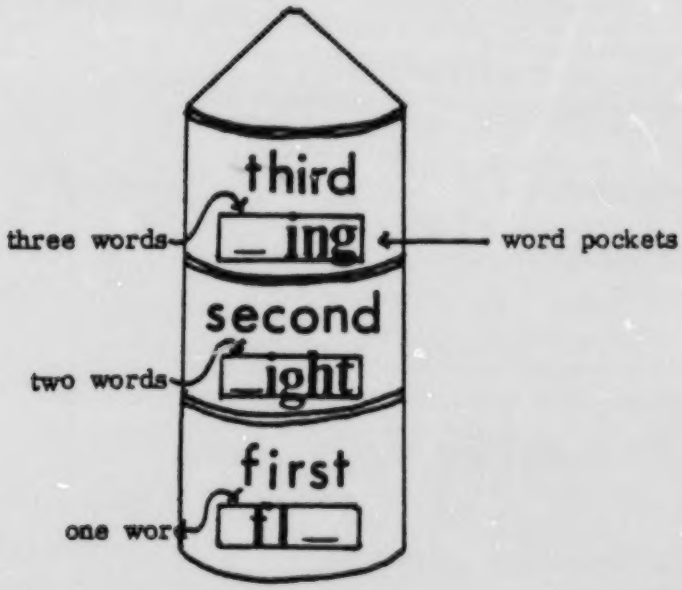
10. Thomas Y. Crowell has published a series of "space" books for primary children which is excellent for use in this unit. [@These books may be taken home by children to read with parents, read in class by the teacher, or taped onto a cassette and played in a listening center for a few students at a time.] The following books are recommended as part of this unit:

Oxygen Keeps You Alive	What Makes Day and Night
What the Moon is Like	The Moon Seems to Change
Rockets and Satellites	The Sun: Our Nearest Star
Weight and Weightlessness	

11. Produce a television show about the launch. Let the children make the TV set using a cardboard box and two wooden dowelings inserted through the top and bottom of the box. Children can make pictures of the launch, the moon landing, and the splashdown. These pictures are then labeled and taped together end to end. The beginning and end of the show are taped to the doweling. The children can then wind the doweling to run the show. [@If individualized help is not available, a commercially produced cardboard TV set complete with paper rolls is available from most school supply stores.]

LANGUAGE ACTIVITIES: SPECIFIC

1. Draw a large rocket and make a word pocket at the level of each stage. Label the pockets "first", "second", and "third" stage. At the top of the activity is the label "Needed For Liftoff". Then at each stage the teacher specifies what is needed to achieve that stage. For example: First stage: "One word beginning with FL"; Second stage: "Two words which have the letters ight"; Third stage· "Three words ending in ing". The child chooses words from a pack of cards in a pocket at the bottom of the activity.



2. "Solar System Sound Alikes"

Make several large suns (12 inches in diameter) from colored railroad board. Print a common rhyming word ending in the center of each sun. Make 9 small 3-inch circles for planets. Glue pictures of words belonging in the word family on the planets. Glue the planets to clothespins. Mix the suns and planets together and ask the children to put the planets in orbit around the correct sun by clipping the planet to the sun. [@Color coding on the back of suns and planets makes this activity self-correcting.]

Variation: This activity may be used with a large group of children if the teacher reads the "sun" words and asks the children to listen for the correct planets. Children may also enjoy creating new planet words.

Variation: This activity may be used as a skill reinforcer in several different areas:

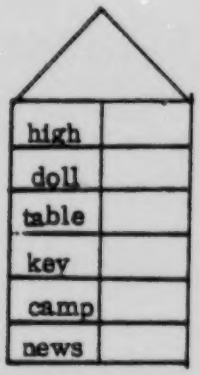
a. digraphs and blends
b. word categories (Print the word "animal" on the sun and ask the children to match or make appropriate "planets".)
c. comprehension skills - print "true" and "false" on separate suns. Type a series of statements which may be answered true or false and place these on the planets. Proceed as described above.

3. Earth and Mars are on a collision course. The people of earth must leave their planet. Besides food and clothing, each person may take three personal items with him/her. [@Discuss the meaning of "collision course" and "personal items" with the children. Ask them to name one of the items which they would choose. Make a flashcard for each item mentioned. Can members of the group read each others cards?]

   Have the children draw pictures of the three items. Label each item for the children and combine the pictures in a class book with the original problem printed on the front. [@Be sure to have the cover "illustrated" by a child artist. Discuss the meaning of the word "illustrated" and "illustrator".]

4. "Compound Countdown"

   Make the following rocket from colored railroad board:



Print the following words on flashcards: way, cloth, ring, fire, house. [@If the words on the rocket and flashcard are attached with Post-It strips or magnetic strips, the rocket may be used over with various compound words.]

The object: To complete the rocket by placing the flashcards on the rocket to make compound words. [@See Teacher's Resource Section for a list of compound words that may be used with this activity.]

Variation: Make five rockets. Number each rocket from 1-5. Place the rocket flashcards face down on a table. Ask the children to choose a flashcard, place it on a rocket to make a compound word. The child then records on paper the number at the top of the rocket. This is his/her score. When all the flashcards have been used, children add up their scores to determine the winner.

5. The Society for Visual Education (SVE) publishes a series of actual photographs taken in space. [@See list of materials.] Discuss these pictures with the children. Ask the children to dictate a sentence which describes each photograph. [@Tagboard sentence strips are useful for copying the dictated sentence. They are available through most school supply stores.] Cover the sentences with clear contact paper and display them with the photographs.

Variation: Some children will be able to match each sentence and photograph as an individual activity.

Variation: Have the children place the photographs and sentences in correct sequence. Example: 1. Rocket in preparation. 2. Blastoff. 3. Astronauts in orbit.

Variation: Instead of dictating sentences, attach individual word cards to the pictures. Can the children match the word with the correct picture. [@This activity may be done orally with a large group or individually.]

Variation: Make a word packet on the back of each photograph using a small manila envelope. Place a series of words (or sentences) on flashcards. Some cards should describe the photograph and some should be unrelated.

The object: To sort the cards into two piles. [@This activity becomes self-correcting if the back of each card and the photograph coded with a numeral.]

6. "Moon Rocks"

Ask the children to collect rocks for the space center. Print the following comparative adjectives on flashcards or sentence strips:

heavy	gray
heavier	grayer
heaviest	grayest
hard	rough
harder	rougher
hardest	roughest

Place each word next to a paper plate. Ask the children to classify the moon rocks by placing them on the appropriate plate. [@It is helpful to leave only one or two sets of plates out at a time.]

7. "The Job of an Astronaut"

1. The most important thing an astronaut must know is...

2. I think I would be an outstanding astronaut because...

3. I prefer not to be an astronaut because...

4. Once, on my way to the moon, I saw...

8. "Space Freight"

Inform the children one Monday that a rocket is leaving on Thursday evening for the moon. Allow each child to nominate one food to send into outer space on the rocket. Once the rocket blasts off, that food will disappear from earth forever.

Procedure:

Provide each child with a paper plate. Ask him/her to color (or cut out) a picture of the food he/she would most like to send to the moon. Label each plate.

Discuss the plates with the children. Why do they dislike the food? Is there anyone in the class who does like that particular food?

Place the plates in a crate or box near the space center rocket. After school on Thursday remove the paper plates and the crate but leave the word cards. Place these cards on an experience chart entitled "These are the foods we sent to the moon." Ask the children to guess what the words say.

Variation: This activity may be used as a bulletin board. Make the rocket and the crate from paper and attach the paper plates and words as they are completed.

MATH ACTIVITIES

1. "Telling Time"

Children will find that telling time is an important part of any rocket launch. Use the classroom clock to aid the children in arranging for their launches. They will want to arrange a time for the launch. What things must be taken into account? How many minutes or hours until liftoff? How many hours are in a day? Will the flight take off in the morning or evening? Why? Mention AM and PM as a means of distinguishing day from night when referring to an hour. Break down the launch time into hours, minutes, and seconds.

2. "Vital Statistics"

Astronauts need to be in top physical condition. They receive a check-up before each flight by a doctor. Encourage the children to weigh and measure each other before donning an astronaut uniform. Keep a "vital statistics" book where such information is recorded. [@A stethoscope is useful to use with this activity. Allow children to listen to a child's heart when he/she is sitting quietly. Ask the child to run in a circle three times and allow the class to listen again. Can they count the heartbeats aloud?]

3. "Moon Trip"

Have an imaginary moon trip - passengers and all. Make and sell tickets, providing the correct number of seats. Tang and Space Sticks make good "take-along" food. Discuss why this is true. Space Sticks are fun to play games with before they are eaten. Separate the Space Sticks into three groups of five and five groups of three. Are the sets equivalent? Count by sets of two. Divide the sets in half, thirds, and fourths. What two are equivalent? Six astronauts, three Space Sticks? Use measurements accurately in preparing the Tang for snack. (Vocabulary to use in mixing Tang: liquid, dilute, tart, equal quantities.)

4. "Estimation"

Place a number of round objects in a clear container. Ask the children to estimate the number of "planets" in the container by writing their "guess" on a slip of paper and depositing it next to the container in a cup designated for this purpose.

At the end of the day go through the slips with the children. Read each guess aloud and tell the class whether the guess is higher or lower than the actual figure. [@Some children will not understand the process involved but they will enjoy listening for the correct answer.]

5. "Perfection"

Astronauts must practice constantly their skill in making decisions quickly and accurately. This commercial game provides the opportunity for young astronauts to practice both. Encourage the children to attempt to improve their own performance rather than encourage competition between children. [@See list of materials for ordering information.]

6. "Solar Systems"

Make a series of large yellow cardboard "suns". Label each sun with a numeral. (Vary the difficulty level with the ability of the group.) Construct a series of 3" planets from various colored cardboard. On each planet print an addition sentence which, when added, equals the numeral on one of the suns.

Object: To match suns and planets by completing the number sentences. [@The difficulty level of this activity may be increased by changing the game to one involving multiplication or division facts.] A simpler version asks the children to match the sun, which is labeled with a numeral or a series of dots, to a planet containing the same number of dots.

7. "Craters On The Moon"

Paste a cardboard rocket on the outside cover of an egg carton. Label the rocket with a numeral. [@Vary the difficulty - have some one- and two-digit numerals.]

On the inside of the carton label each egg depression with a numeral which is less than the one on the rocket.

Provide the children with twelve circles of cardboard (small enough to fit in each egg depression). Cover the circles with clear contact paper or laminate them.

Instruct the children to pretend they are lost on the moon. In order to return to their rocket they must "home in" on the rocket from each "crater" (egg depression) by writing a numeral on the cardboard circle which, when combined with the numeral in the crater, equals the number on the rocket.

Example: One crater has a numeral 6 in the bottom. The rocket is number 10. The child writes the numeral 4 on a circle and places it in the crater. He/she then proceeds to the next crater.

8. "Liftoff Ladders"

Construct a large cardboard rocket and a series of paper ladders leading up the side of the rocket. Print a number sequence on each rung of the ladder. Omit numerals in several rungs on each ladder. Place one of the ladders next to the rocket.

Example: 2, 4, 6, 8, 10, 12...
3, 6, 9, 12...
5, 10, 15, 20, 25...

This activity may be used as oral group practice with the children filling in the blanks aloud.

9. "Make a Star"

Make two star-shaped math problems as pictured below. Cut the stars into pieces.

Object: To make the stars by solving the math problems.

10. "Time Until Liftoff"

[@This may be a large group, small group, or individual activity.]

Construct two identical cardboard rockets approximately one foot high. Print ten "liftoff" cards indicating various periods of time:

Time to liftoff: 8 years
Time to liftoff: 4 months
Time to liftoff: 20 seconds
Time to liftoff: 3 days
Time to liftoff: 3 hours.

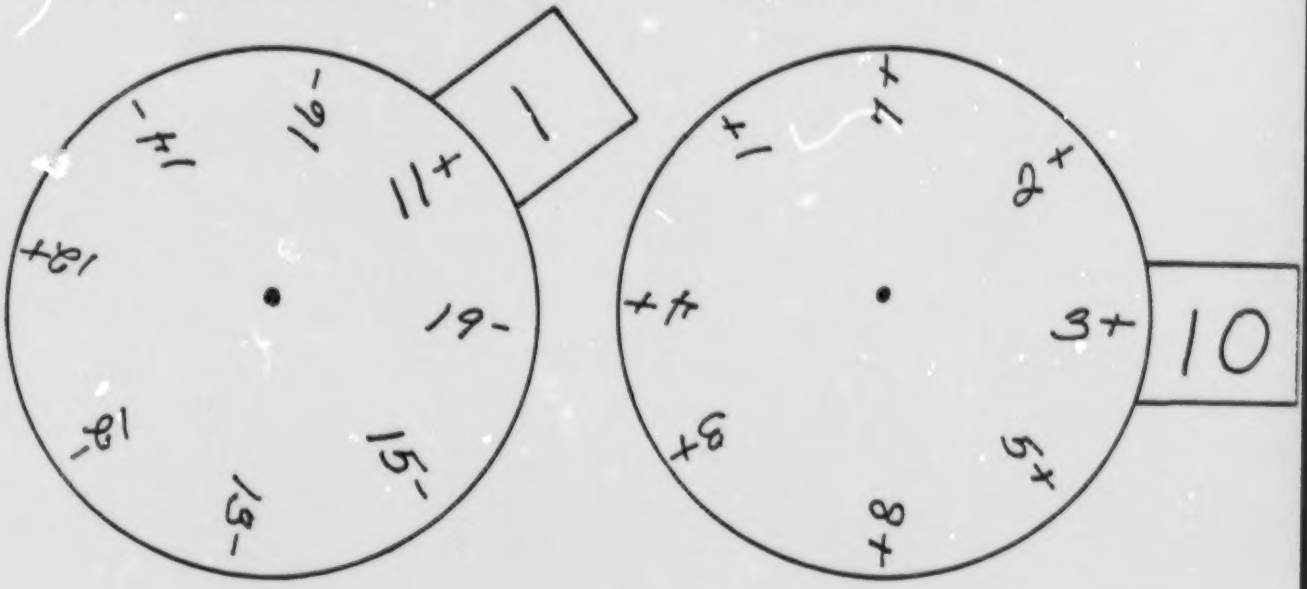
Group activity: Place the rockets so the children can see them and place a "liftoff" card under each rocket. Ask the children to guess which rocket will liftoff first. When the correct answer has been guessed, ask the child to indicate the reason for his/her choice. [@This prevents just "guessing" and it also provides a review for other children who may not have been able to choose the correct rocket.]

Individual: Make a board game with two rows of five rockets. Label one row "first" and the other row "last". Print "liftoff" cards as described above. A child turns all of the cards over and draws two. He/she decides which of the cards indicates the shortest amount of time and places that card under a rocket in the "first" column. The second card then is placed in the rocket directly opposite in the "last" column. The game is complete when all the rockets are "ready for liftoff".

11. "The Instrument Panel"

Label four paper plates with addition and subtraction equations. The cardboard gear shifts for each "Instrument Panel" are labeled with an addend or subtrahend. The paper plates and gear shifts are then attached to a cardboard box with paper brads.

Object: To have the children find the solution to the problems. (This may be used with a math worksheet which the child completes.)



12. "Weeple People"

This manual, published by McGraw-Hill, is a high interest introduction to identifying attributes of various groups. It is an opportunity for children to think and create for themselves by observing and conceptualizing.

Weeples are strange little outer-space creatures with names like "Wenks", "Boings", "Franxes", and "Toopeds". Throughout the book children are invited to participate by creating poems, games, and songs about the Weeple People which indicate they understand the concepts presented. [@See Teacher's Resource Section for sample pages.]

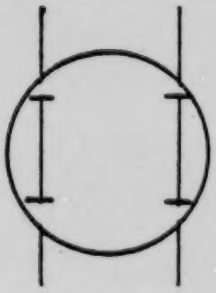
13. "Creature Cards"

These are also available from McGraw-Hill's ESS materials. The series of 20 cards provides a follow up to the book described above. [@See list of materials.]

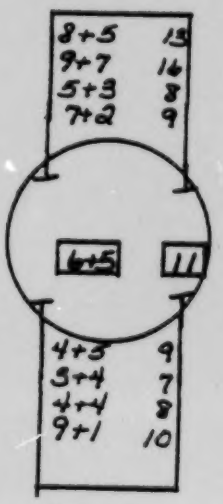
14. "Planet Problems"

Make a planet from a piece of oak tag and cut two slits. Make a strip containing addition and subtraction problems and the answers printed next to them. The student pulls the strip through the ball answering the problems and self-correcting by lifting the flap.

Back



Front



15. "Math Countdown"

Print the numerals 1-12 on a large circular cardboard planet. Make a double pointed spinner. [@See illustration.]

The object is to spin the dial and add the two numerals to which it points. This may be written in the form of an equation on a worksheet.

worksheet

____ + ____ = ____

____ + ____ = ____

____ + ____ = ____

16. "Program the Computer"

Mark a large piece of colored oak tag into 50 two-inch squares. Number the squares from one to fifty leaving several blank spaces as illustrated. Laminate the board or cover it with clear contact paper. Staple a library pocket to the bottom right corner. Place activity cards in the pocket directing the children to "program" the computer according to the directions on the input cards.

0	1	2			5		7		9
10		12	13			16		18	19
20	21			24	25	26			29
		32		34	35			38	
	41	42	43				47		
50			53		55			58	59
60	61		63		65		67		69
		72		74		76		78	
80	81	82			85	86	87		
	91	92				96	97		99

Activity Card #1 - Write the missing numerals in the blank spaces using a magic marker.

Activity Card #2 - Put an "X" on ten odd numbers. Put a circle around ten even numbers.

Activity Card #3 - Count by 5's. Circle each numeral.

SCIENCE PREFACE

McGraw-Hill has published an Elementary Science Study Program (ESS) which is presently in the public domain. Roughly translated, that means that the program, which was originally developed with federal funds and later published by McGraw-Hill, may now be copied without the permission of the commercial company. Coventry's kindergarten and first grade teachers enthusiastically endorse the program and have incorporated it into the eight interest units. When the letters ESS are used to describe an activity, it indicates material from the McGraw-Hill program. The initial copies of the material may be purchased by contacting the local company representative or by ordering through the company.

SCIENCE ACTIVITIES

The following ESS Units (Elementary Science Study Units, published by McGraw-Hill) are recommended for use with the Space Unit (#1-3):

1. Mobiles

   Activities in this unit involve constructing mobiles and experimenting with balancing. In the Space Unit children enjoy making a planet mobile, mobile of the earth with the moon and other satellites, or a mobile of imaginary characters from outer space can provide excellent opportunities for planning and problem solving.

2. "Lights and Shadows"

   The Teacher's Guide for this unit suggests measuring the shadow of the school flagpole at noon and at periodic intervals during the day. Children also devise shadow figures to project on the classroom wall and are encouraged to play shadow tag outdoors reporting their observations on the properties of shadows to the teacher.

3. "Ice Cubes"

   Astronauts must be protected from extremes of temperature. Activities in this unit challenge children to "make a better ice cube keeper". Students explore various types of insulation and other factors which influence ice melting.

4. "Contamination"

   Germs and bacteria interest young children. Parents are always urging them to wash their hands before eating, not to eat food that has dropped on the ground, not to cough in peoples faces, etc. When the astronauts returned from the moon landing, they were isolated for several days to be sure they were not "contaminated" with micro-organisms from the moon. An easy classroom "experiment" is to allow a child or group of

children handle a raw, peeled potato after outdoor play and place it in a sterile (boiled for fifteen minutes) glass jar. Seal the jar immediately. Repeat this procedure two more times with two more potatoes. Then have a child, or children, scrub his/her hands carefully with very warm water and plenty of soap. Have the child handle another raw, peeled potato and place it in a sterile container. Repeat twice with two more pairs of clean hands, two more potatoes, and two more sterile containers. [@Seal the lids closed with white glue to prevent bacteria from escaping.] The children then observe and record differences in the potatoes over a two-week period.

[@Helpful hints:

1. Peel the potatoes with clean hands just before the experiment.

2. To conserve potatoes, have the children handle 1/4 of a potato for each part of the experiment and place the pieces in sterile baby food jars.

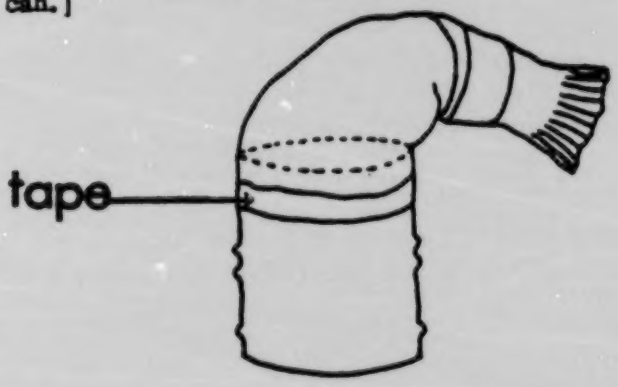
CREATIVE DRAMATICS

1. Introduction:

A crew of astronauts is sent to explore the far side of the moon. Since the far side of the moon is in constant darkness, the astronauts experience considerable difficulty in identifying objects with the weak source of light which they bring with them. Space command headquarters on earth is anxiously awaiting a report on the findings.

The Activity:

Place three or four objects in a coffee can which has had a cut off sock stretched over the top. [@Be sure to tape the circular top edge first to avoid cuts when children put their hands through the sock into the can.]



Divide the class in half. Select a group of children to be "flight directors" at Space Command Headquarters on earth. They will attempt to guess what the second group of children, the astronauts, communicate to them.

The astronauts may not tell what the object or objects seems to be but may only send a description back to earth. The flight directors then attempt to guess what the astronauts may have found. When the objects have been successfully described the two groups switch roles.

Follow-up:

Ask the children to describe verbally a possible connection between the four items. How did they get there? For what were they used?

[@This activity becomes a language experience story starter if, instead of describing the connection between the items verbally, the children are asked to put them in story form on paper. The stories may then be grouped under a common title such as "Mystery Objects Found on Moon". "Scientists Puzzle Over Meaning".]

Individual Activity:

This activity may be used as a learning center activity by placing the can in the space center with several sheets of paper next to it. "Astronauts" make their report by feeling the objects in the can and writing or coloring a picture of their guess on the paper.

CRAFT AND CREATIVITY ACTIVITIES

1. "Toothpicks and Peas"

[@Don't miss this activity! It could be listed under language, math, or science but was included here because it is basically a manipulative craft activity with broad curriculum applications.]

The Recipe:

1 pound whole, dry peas. [@Not frozen or canned. These are found near the beans and rice section of a supermarket.]
Colored, round toothpicks (the wooden cocktail party kind). 4-5 boxes per class
Blue food coloring. (2 tablespoons.)
1/4 Cup vodka, gin, or any transparent alcohol. [@The alcohol is needed to allow the food coloring to penetrate the peas. Do not use rubbing alcohol since it is poisonous.]
Water

Directions:

Place the dried, whole peas in a large pot or other plastic container. [@A two-quart size container is fine.]

Add the alcohol and food coloring to the peas and mix thoroughly with a spoon.

Add enough water to barely cover the peas and leave them to soak overnight or for a period of six to eight hours.

Rinse the peas thoroughly after this period to remove any food coloring which may be left on the surface of the peas.

Drain the peas and store them in a plastic ice cream or Tupperware container until ready for use.

This amount of peas will serve a class of twenty-five for a weeks activities.

The Activities:

Have the children insert the colored toothpicks into the peas in the following activities:

A. "Constellations"

Use H.A. Rey's book to make constellation patterns which the children may copy with the toothpicks and peas. Allow the "constellations" to dry for two or three days before hanging them in the classroom. [@As the peas dry, they will shrink and grasp the toothpicks tightly. A drop of Wilhold glue on the peas will insure that they remain connected while hanging. Encourage the children to handle the finished product as little as possible after they are made before they are completely dry.]

B. "Rockets and Lunar Landing Modules"

Have the children invent new and better rockets and other outer space equipment using the toothpicks and peas as a base for the design. Ask them to explain their inventions to the class and describe any new or unusual features which they have added. [@See illustration.]

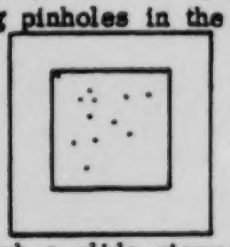
Language activity: Display three of the rockets or lunar modules and provide three labels: large, larger, largest; or tall, taller, tallest; or wide, wider, widest. These may be done orally with some children. However, it is still helpful to attach the written labels to the display since children will often go back later and "read" them.

C. "Outer Space Sculputres"

Allow the children to create from their own imagination using the toothpicks and peas. When the sculptures dry, hang them from the ceiling and ask the children to title them. [@Discuss the importance of the title to the children. Point out titles whenever stories are read aloud.] Hang the title of each work from a paper clip which has been stretched out and then suspend the "objet d'art" from the title using the same technique.

2. "Constellation Slides" (A teacher craft)

Use old under-exposed 35mm slides for this activity. [@If the slides aren't dark enough, place two together.) Copy a constellation onto the slide by poking pinholes in the appropriate places.



When viewed through a slide viewer, the children can see a night sky with the constellation. Once the slides are made they may be used in many activities. For example, in #1 in this section, instead of using H.A. Rey's book "Find The Constellations" as a source for patterns to make with the toothpicks and peas, the children may look through the viewer and copy the pattern.

If the viewer is placed on a table in the Space Center with a different slide each day, the children may look through the viewer and name the constellation. [@Don't give out the correct answer until the end of the day. If an older assistant or aide is available, have the children dictate their guess which is recorded and placed in a box next to the viewer.] Some children may be able to find the constellation in a book and copy the name onto paper themselves.

INSTITUTE FOR CREATIVE EDUCATION
educational improvement center - south

Abstract for the

Institute for Creative Education

Elementary Curriculum

The Institute for Creative Education, a product of the Educational Improvement Center-South, is a project funded through Title IV-C, ESEA. The goal of the project is to increase students' creative thinking abilities to develop fluent, flexible, original and elaborate solutions to problems or tasks. During its three years of development (1975-1978), the Institute developed a curriculum that was field tested in heterogeneously grouped classrooms throughout South Jersey. This curriculum, which is only available through training, consists of lessons that are directly linked to all subject areas, and are sequentially ordered according to the grade level of the students and the difficulty level of the lessons to teach a creative problem-solving process. During a two to three-day workshop, teachers are trained in the ICE concepts and learn how to facilitate the creativity fostering, divergent thinking lessons with their students.

Available to interested districts is an awareness session, approximately one and one-half hours in length, that provides an overview of creativity and the project. An explanation of the three project components, the curriculum, and those elements that block and foster creativity are presented through various activities that directly involve the workshop participants. Question and answer periods are also included throughout the session.

The attached lessons are a sample of the Institute's elementary curriculum. Included are two examples each of the five lesson difficulty levels in a wide variety of subject areas, which are a good representation of how the curriculum teaches the creative problem-solving process.

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The following briefly explains the creativity difficulty scale:

LEVEL	CHARACTERISTICS
I	Brainstorming.
II	Brainstorming, plus content.
III	Brainstorming, plus content, plus restrictions* on expected responses.
IV	Brainstorming, plus content, plus restrictions, plus production of a product.
V	Brainstorming, plus content, plus restrictions, plus production of a product to reinforce specific academic concepts.

In September 1978, the Institute's upper elementary level, grades 4-6, was validated by the New Jersey Department of Education and in July 1979 was granted federal validation by the U.S. Office of Education, Joint Dissemination Review Panel. In October 1979 the Institute for Creative Education was chosen as a Developer/Demonstrator of the National Diffusion Network to conduct dissemination activities throughout the United States.

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*restrictions: ruling out existing solutions thus encouraging creative or new solutions.

Level I
Grade LE, UE

Widget

Subject Area: Art, Language Arts

Teacher Introduction:

This lesson is a good beginning one for unrestricted brainstorming. Children share a poem and then draw a picture of a "widget," which is anything they want it to be.

Student Motivation:

Read the poem "What Is a Widget?" to the class. (For the older students hand out a copy of the poem so they can read along.) Tell the students that no one really knows what a widget might be. Discuss briefly what they think a widget is.

Problem:

The students will draw or list the many, different, and unusual ideas of what they think a widget might be. (The upper elementary students will also list the many, different, and unusual uses of a widget on the back of their papers.)

Activities:

1. In five minutes or less, students at the lower elementary level will brainstorm together for what a widget might be. Upper elementary students may list their ideas individually.

2. In the remaining class time, students will draw a picture of their favorite ideas.

3. Older students then will write many, different, and unusual uses for their widgets, while younger students will talk about their drawings orally as they hold up the pictures.

Evaluation:

Many - Total number of responses of what a widget could be (of uses for a widget).
Different - Number of categories of responses of what a widget could be (of uses for a widget).
Unusual - One-of-a-kind responses of what a widget could be (of uses for a widget).

Developed By:

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WORKSHEET FOR 'WIDGET'

What Is A Widget?

A genie is a midget,
Who makes your dreams come true.
It's easy to talk to a midget,
But what in the world is a widget?

An ant likes to fidget,
In his sandhill in the yard.
It's easy for an ant to fidget.
But what in the world is a widget?

The 2 in 29 is a digit.
The 6 in 16 is one also.
It's easy to think of a digit.
But what in the world is a widget?

Level I
Grade LE - HS

"Thank You For Our Daily Bread..."

Subject Area: Social Studies, Language Arts

Teacher Introduction:

Use this lesson near Thanksgiving Day. This lesson will yield a high fluency of responses as students list things both humorous and serious that they are thankful for.

Student Motivation:

Discuss with the students the meaning of the first Thanksgiving feast. Focus on the hardships the Pilgrims encountered when first arriving in America and how thankful they were when the harvest brought plenty of food. Direct the discussion to the celebration of Thanksgiving in modern times and what kinds of things Americans are thankful for today.

Problem:

The students will think of many, different, and unusual things that they are thankful for in their life.

Activities:

1. Each student will draw or list the many, different, and unusual things for which he/she is thankful.

2. After choosing his/her favorite idea, each student will share the idea with the class.

3. FOLLOW UP: For the older students, have each student write a poem that will incorporate the items from his/her list of things for which he/she is thankful.

Evaluation:

Many - Total number of things for which students are thankful.
Different - Number of categories of things for which students are thankful; such as, food items, family members, conditions of health, etc.
Unusual - One-of-a-kind things for which students are thankful.

Developed By:

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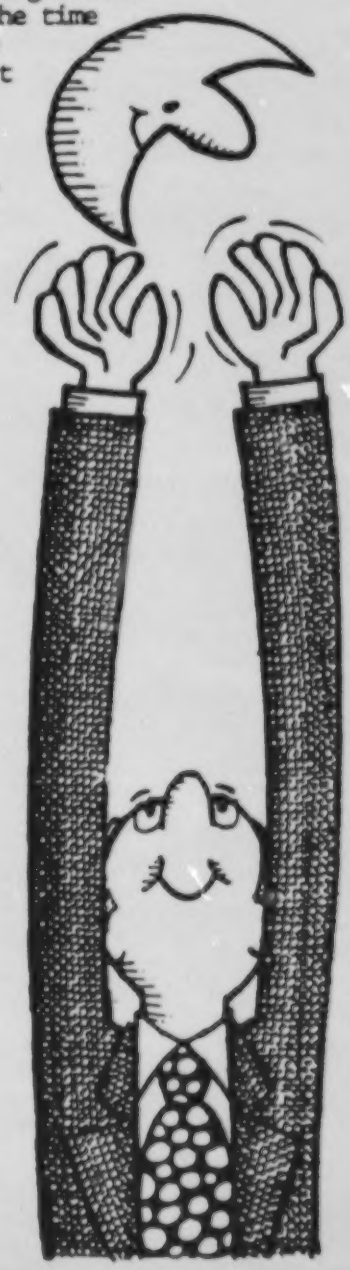
Level I
Grade UE - HS

Zzzzzzz

Subject Area: Health

Teacher Introduction:

Shakespeare wrote that "sleep knits up the ravelled sleeve of care." Healthy people welcome the curing and refreshing effect that sleep gives. But some would also like to have the time that sleep takes because it would lengthen our active lives by one-third. This lesson asks students to list many, different, and unusual ways that their lives would change if they did not sleep. Although it is assumed that one would not have to sleep, do not delineate this. Perhaps some student would prefer to generate ideas about how a person would deteriorate if he/she needed sleep but could not get any.



Student Motivation:

It is reported that there are certain Eastern religious cults that never sleep. These monks have replaced the large block of sleep time with short periods of meditation. How would our lives change if we, too, did not sleep?

Problem:

The students will list many, different, and unusual ways their lives would change if the sleep cycle was eliminated.

Activities:

1. As a group, the students will have ten minutes or less to list as many, different, and unusual ways their lives would change if they did not need sleep.

2. The students will select their favorite idea for elaboration and in small groups of five or so will plan a 15-minute segment of a TV news broadcast. The group may use any means they wish to combine each group member's favorite idea.

3. OPTIONAL: The groups may perform their news broadcast before the class, either that day or at another time. Scripts may be written, or they may be improvised, depending on which method the students feel most comfortable with.

Evaluation:

Many - Total number of changes.
Different - Number of categories of changes; such as, new occupations, new wage scales, more services needed (all-night bank, groceries, etc.), etc.
Unusual - One-of-a-kind changes.

Developed By:

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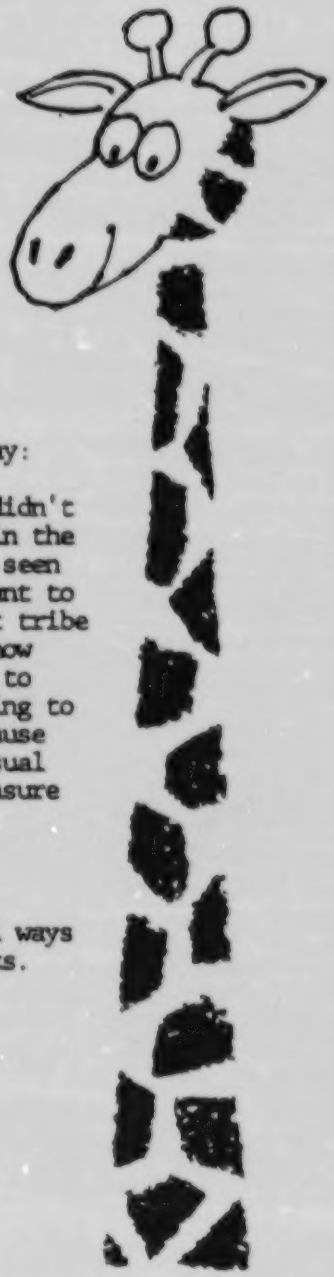
Level II
Grade LE, UE

How to Measure a Giraffe's Neck



Subject Area: Mathematics

Teacher Introduction:

This lesson is intended to provide an awareness of the importance of measurement and standard measure. Do not be concerned that students' lists be extremely accurate, technical, or practical ways to measure a giraffe's neck; they should have fun with the lesson.

Student Motivation:

Tell the students, as a motivation for the lesson, that there is a small tribe in Africa that is beautiful and gentle - a quiet group of people. Say:

"Let's pretend that we discovered a tribe that we didn't even know existed until recently. They live deep in the jungles, but near them is a clearing where we have seen some of the world's largest giraffes. We do not want to stay in this area where we might disturb this quiet tribe and the animals nearby, but we would like to know how tall the giraffes are. So we have asked the tribe to measure them for us. The tribe members are not going to use rulers or yardsticks or any measuring tool because they don't know how. How many, different, and unusual methods can you think of that they might use to measure the giraffes?"

Problem:

The students will list many, different, and unusual ways that a primitive tribe might measure giraffes' necks.

Academic Concepts:

Linear measurement.

Activities:

1. In ten minutes or less, the students will list many, different, and unusual ways that could be used by the tribe to measure the giraffes' necks.

2. OPTIONAL FOLLOW UP: Each student will show the method in use, i.e., he/she will draw a tribesman measuring a giraffe. (The teacher may wish to clip the giraffe from this lesson and duplicate copies of it for the class.)

3. An alternative to the lesson is simply to post a long sheet of paper in the classroom and invite students to list things and reasons we measure. For example, students could list that they measure their height, their weight, their clothes (which are measured and translated into sizes), how far they can jump, run, and throw things, etc. This list can be labeled simply "Many, Different, and Unusual Things and Reasons We Measure."

Evaluation:

Many - Total number of ways that a primitive tribe might measure giraffes' necks.

Different - Number of categories of ways that a primitive tribe might measure giraffes' necks; such as, measuring with parts of the body (how many hands high), measuring with parts of plants, measuring without touching the giraffes' necks.

Unusual - One-of-a-kind ways that a primitive tribe might measure giraffes' necks.

Developed By:

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Level II
Grade Ut

Cold Cutters
(Insulation)

Subject Area: Science

Teacher Introduction:

You may wish to preface this lesson by having the students jog in place in the room for two minutes while you explain that jogging is one way to warm up when the room is chilly. If the students seem to be having difficulty in coming up with different ways to keep warm, then have a brief class discussion with them to get them started. Try to elicit ideas like moving fast, putting on clothes, rubbing yourself, lighting a fire, curling up into a little ball, making a shelter, etc.

After the discussion, or on another day, let them act out some of their ideas about keeping warm.

Student Motivation:

Say to students: "You're camping in a very cold region and you're having trouble keeping warm. You and a friend are using all the clothing available - but you're still cold! Pair up with your buddy and see how many, different, and unusual ways you can come up with of keeping each other warm. Remember, you have no electricity!"

Problem:

Pairs of students will list the many, different, and unusual ways of keeping each other warm without electricity.

Activities:

1. In ten minutes or less, students will work in pairs or alone to list the many, different, and unusual ways of keeping each other warm without electricity.

2. In the next fifteen minutes or less, some volunteers will be asked to pantomime or to present their skits for keeping warm. The pantomimes or skits should be no longer than two minutes in length.

Evaluation:

Many - Total number of ways of keeping each other warm without electricity.
Different - Number of categories of ways of keeping each other warm without electricity.
Unusual - One-of-a-kind ways of keeping each other warm without electricity.

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Level III
Grade LE, UE

New Notes

Subject Area: Music

Teacher Introduction:

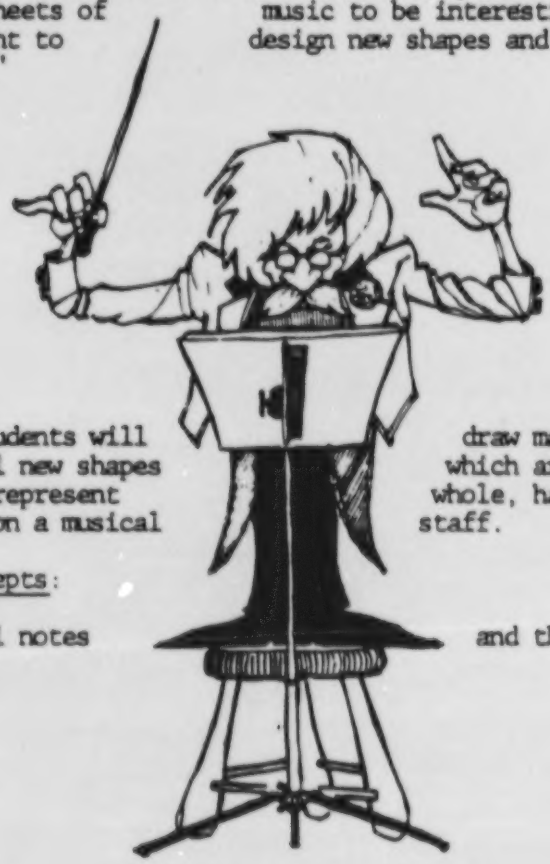
Music is a form of "communication" that transcends all language barriers. People all over the world play music by reading notes that are international. Three of the most common notes are:

the whole note (4 beats per measure)
the half note (2 beats per measure)
the quarter note (1 beat per measure)

Student Motivation:

Give students this "pretend" situation:

"You are the world's 'best' musician. You are tired of the three shapes for the whole, half, and quarter notes. You want your sheets of music to be interesting and different. You want to design new shapes and write them on a staff."



Problem:

The students will draw many, different, and unusual new shapes which are easy to make and could represent whole, half, and quarter notes on a musical staff.

Academic Concepts:

Musical notes and their values.

Activities:

1. Each student will draw as many, different, and unusual shapes as he/she can. The new notes should be shaped so that they are easy to draw on a staff.

2. Each student will select the three most unusual and write them on a staff.

3. OPTIONAL FOLLOW UP: The students will compose a short song, no longer than four measures, using their new shapes. Or they will copy a song that they already know from some music that they can get from their music teacher, using their newly shaped notes.

Evaluation:

Many - Total number of shapes to replace whole, half, and quarter notes.
Different - Number of categories of shapes to replace whole, half, and quarter notes.
Unusual - One-of-a-kind shapes to replace whole, half, and quarter notes.

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Level III
Grade UE

Recess Refreshers

Subject Area: Physical Education

Teacher Introduction:

Are you weary of the same indoor games that you play in your classroom in the winter or when it rains? You will find that this activity is an excellent way to replenish your stock of ideas for indoor activities. The activities are guaranteed to be popular with the students since they are the ones who made them up, and who will get to use them.

Due to time limitations, you may wish to end the lesson after activity #1 (below). However, it is highly recommended that you complete the entire lesson as written for the following reasons:

1. It will provide you with useable indoor games.
2. You can share a "recess refreshers" booklet with other classes.
3. Children learn a great deal about clarity and practicality if they have to teach and play the indoor game based on their determined directions. (See activity #3 below.)

Student Motivation:

This lesson is designed to create new indoor games for inclement weather. Ask the students:

"What games have you played inside your classroom either this year or any other year in school?

What equipment did you need for it?

What exercise did it give your body?

What were some of the rules? Why did it have those rules? (So it wouldn't be too noisy, so everyone would have a turn, so we could keep score, etc.)

What are some of the safety factors we have to consider for an indoor game? What would be some of the definite 'no-no's' because of safety?

Using any safe equipment that you want, do you think you could create a new game for us to try on a rainy or snowy day?"

Problem:

The students will use many, different, and unusual ideas about equipment, rules, actions (the play), scoring, and directions to develop a new indoor game. RESTRICTIONS:

1. The equipment must be obtainable to the student or teacher.
2. The game must be judged safe by the teacher.
3. The game must be completely unlike any known game, as judged by the teacher.
4. The game must provide the players with some physical exercise.

Academic Concepts:

Physical and emotional health.
Writing directions.

Activities:

1. The students will work individually for one class period to write the directions, rules, scoring, and equipment needed for many, different, and unusual games which are completely new.

   RESTRICTIONS: The students should write on one side of the paper only. The students will also make any drawings necessary for the game, such as the floor plan, the position of the players, a special board or chalkboard drawing, etc. These will be done neatly with dark pencil or pen and with rulers.

   NOTE: You may wish to duplicate their games to share with other classes and/or to distribute to the class in booklet form. Therefore, copies must be clear in order to reproduce.

2. In a second class period, the game directions and drawings will be proofread, although final copies need not be written at this time.

3. The teacher will collect the rough copies, and throughout the next few months, as each game is field tested, the class will discuss its weaknesses, if any, and the author will be given his/her rough copy to rewrite the game as necessary and to write a final copy.

   NOTE: Each game should be played as it is written to point out to the students that directions, drawings, etc. must be very clear. Try to field test every game that is created. The students who have created an unpopular or boring game

may have since thought of a new game and will be willing to try again, especially if the teacher is going to make up a game booklet containing all of their contributions.

Evaluation:

Many - Total number of games.
Different - Number of categories of games; such as, games played while seated, games played with a ball, games using the chalkboard, the wall, etc.
Unusual - One-of-a-kind games.

Developed By:

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Level IV
Grade LE, UE

You Are An Architect

Subject Area: Technology, Science

Teacher Introduction:

This lesson will give young students a chance to work in three dimensions, to work with a variety of materials of their own choosing, and to learn in a tangential, informal way about such topics as design, beauty in buildings, scale models, insulation and how homes are built for comfort and convenience.

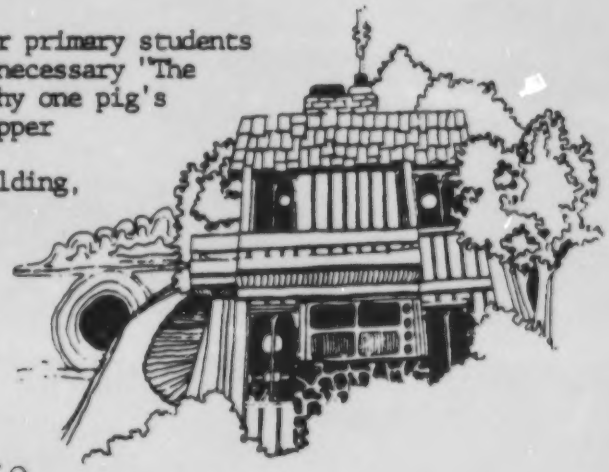
Student Motivation:

Ask the students:

"Do you know what an architect does?
What skills would an architect need to do the job well?
What would happen if an architect built an office building or a home for someone and it fell apart or let the rain and wind in?
Does an architect decide what will go inside a house?
Who usually does that job?
Would you like to be an architect?
If you were an architect, would you design an ordinary house for yourself or for your 'customers?'
With increasing needs for energy sources, how might that affect design of homes?
What would be some unusual materials you could use on the outside of a very different house?

Keep thinking of these unusual things because you may have the most unusual house in the class when we are finished with this activity!"

NOTE: An alternative motivation for primary students is to remind them of and retell if necessary "The Three Little Pigs" and talk about why one pig's house was safer than the others. Upper elementary students may find more challenge in building their own building, not "covering" a box.



Problem:

The students will think of many, different, and unusual materials that they could use on the outside of a model of a house made from a shoebox or similar size box.

Academic Concepts:

Insulation and cooling properties of materials.
Scale models.
Building design.

Activities:

1. In ten minutes or less, brainstorm as a class for many, different, and unusual materials that could be used to cover a house. Ask students to bring in (from home) whatever materials they can. (For the teacher's use; possible responses are yarn, feathers, sand, rice, crumpled and smooth paper, aluminum foil, fabric of all types, grasses, bark, cork, leather, vinyl, plastic, waxed paper, corrugated cardboard, buttons, etc.)

2. In two class periods or less, students will cover a shoebox or similar size box with their unusual materials. They may add roofs of any type and they may use the box vertically or horizontally (or at an angle if they think of this).

3. Concluding activities for this lesson will depend on the abilities of the group. Ranging from easiest to more advanced, you could:

   a. Have children display and explain their houses.
   b. Ask the class who has houses they think will float and keep the people in it safe in a flood. Using a bucket, basin, or water table, try floating some of the houses. You may wish only to simulate rain by dripping it over houses.
      Ask the class who has houses which would really keep the people in it warm or cool. Put these houses together in an equally sunny or shady spot. Put cups of ice water in the cool houses and cups of hot water in the warm houses. At half hour or forty-five minute intervals, use a thermometer to check the temperature of the water to see whose houses are the best for coolness and warmth.

Evaluation:

Many - Total number of materials used.
Different - Number of categories of materials used; such as, natural materials from animals, natural materials from plants, kitchen materials, etc.
Unusual - One-of-a-kind materials used.

You may also wish to categorize the types of houses designed.

Developed By:

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Level IV
Grade UE - HS

This Year's Fossils

Subject Area: Social Studies

Teacher Introduction:

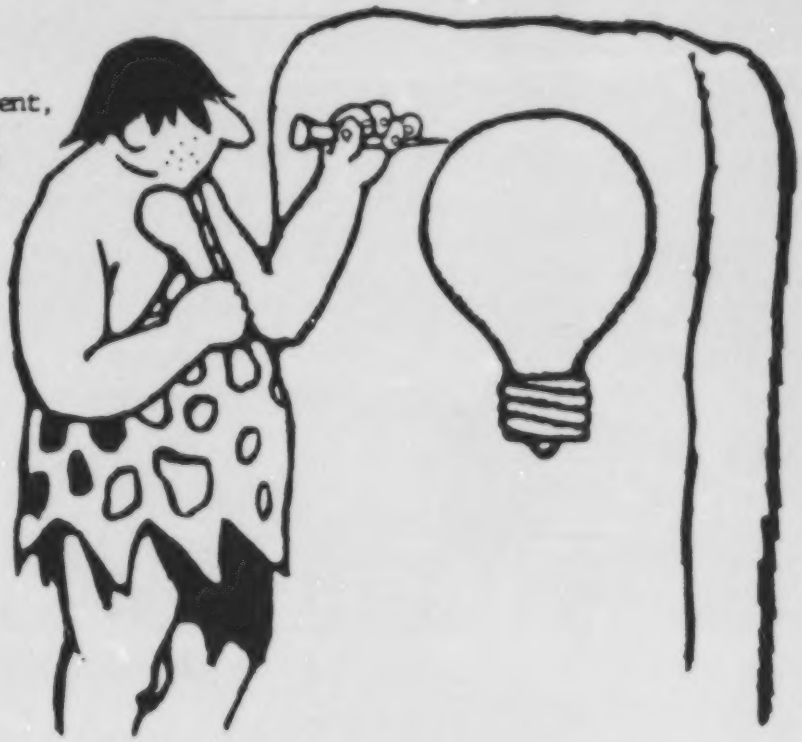
This lesson asks the students to list items which they feel will be found fossilized far in the future. Although they may wish to list important reflections of our technological advancements, you may want to orient their thinking to items which would have become fossilized because of their commonality or their uniqueness in representing the current age or culture.

Student Motivation:

A quick, effective way to motivate students for this lesson is to make an impression in clay of an item that could be a future fossil. For example, press the shape of a pair of scissors into clay and tell students that it is a fossil. If they respond that it could not be a fossil because it is not old, tell them that in the year 11,000 A.D. it will be old and that they are going to think of many more "future fossils."

Problem:

The students will design many, different, and unusual fossils of the future. The students will model with clay their favorite ideas from the list.



Academic Concepts:

Current events.
Understanding of cultural geography.

Activities:

1. As a class, in ten minutes or less, the students will brainstorm for a list of things which are unique to this century and are found in the United States.

2. In clay, the students will design what archeologists in the year 11,000 A.D. might find which represents our current age and society.

Evaluation:

Many - Total number of fossils listed.
Different - Number of categories of fossils listed.
Unusual - One-of-a-kind fossils listed.

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Level V
Grade UE, JH

The Personalities of Planets

Subject Area: Language Arts, Creative Dramatics

Teacher Introduction:

The students may be helped in their elaboration and imagination in this activity if it is used after a study of the planets or if, as a class, you read some interesting, factual, brief information about each of the planets, and/or see a film or filmstrip, and/or use overheads accompanied by oral information about the planets.

Because the students are asked to dramatize the personalities of the planets, there will be little differentiation in their interpretations if they have no background information. It is recommended that you use a chart or the chalkboard to list information about each planet so that students can refer to it during the activity.

Student Motivation:

Say to the students:
"Let's review what we know about the solar system. What planet is closest to the sun? Farthest? What does Saturn look like?" (Review as necessary to stimulate thought.)

"Just as we have dramatized other feelings, stories, and situations this year, we are going to dramatize how these planets would interact with each other if they had personalities. Which heavenly body would be 'the boss'? How would your favorite planet act toward the others? Who would not get along and why?"

Problem:

The students will list many, different, and unusual ways that the planets would behave if they were people. The students will role-play a conversation between the planets using different voices and incorporating humor.

Academic Concepts:

The solar system.

Activities:

1. In twenty minutes or less, the students will brainstorm for many, different, and unusual ways that planets would behave if they were people.

2. In groups of three or four, the students will plan a dialogue between the planets. They will include funny things and, when possible, have the dialogue reflect real facts about the planets. (Example: Sun says to Saturn that she is so dizzy she has rings around her.)

3. Each student will speak the part of at least two planets, changing his/her voice as the roles are changed.

4. The students will present their interplanetary dialogue to the class.

Evaluation:

Many - Total number of ways the planets would behave if they were people.
Different - Number of categories of ways the planets would behave if they were people.
Unusual - One-of-a-kind ways the planets would behave if they were people.

Developed By:

Linda Ennis
Berlin Community School
Berlin, New Jersey 08009

Level V
Grade UE - HS

Sugarless Sweet

Subject Area: Home Economics

Teacher Introduction:

The students may learn some valuable nutritional facts from this lesson as they try to make a sweet food without sugar or artificial sweeteners. Many students may have been largely unaware that not all sweet foods contain sugar. Honey and fruit are the most obvious naturally sweetened food items that the students may include in their recipes.

The fluency of responses will be in the number of recipes rather than in the number of naturally sweet ingredients. At the conclusion of this activity, you may wish to discuss or study the value of the other foods (non-sweets) which were part of the recipes.

Student Motivation:

For upper elementary students: Tell the students the story about "Old Mother Hubbard" who went to the cupboard and found it bare. Then ask the following questions of the students: "What if you were making a dessert for dinner guests and discovered that you had no sugar. What could you do so that you could still serve a sweet dessert?"

"He's such a Sweet Boy!"

For junior high and high school students: Review with the students the various food families, what foods are in each, and what they contribute to good nutrition. Define sugar as brown, white or confectionary sugar, or any chemical artificial

sweeteners, none of which may be included in the recipe. Inform the students that these sugars have either no nutritional value or very little (brown sugar is minutely better than white). They are a poor food item because they raise the energy level rapidly, but then lower it to less than its level was before eating the sugar. You may wish to take the time to have students list everything they have eaten in the past 24 hours that contained sugar. (This would include many items that are not desserts.) The students should be made aware of the need for the majority of people to alter their eating habits to exclude much of the sugar they consume. What natural substitutes can be used in dessert recipes that call for sugar or sweeteners; substitutions that would be beneficial and healthy food products?

Problem:

The students will make many, different, and unusual sweet things to eat without using sugar. They must use ingredients from at least two food families. They may not use artificial sweeteners.

Activities:

1. In ten minutes or less, the students will list ideas for sugarless, sweet desserts. They may not use artificial sweeteners. To give them some ideas, you may wish to allow time for the students to glance through dessert recipes in the library or in cookbooks brought from home. Assign the students to bring in the necessary foods, bowls, etc. if the cooking is to be done in school.

2. The students will make their new sugarless sweets, taste them, and trade tastes with other students.

Evaluation:

Many - Total number of ideas for new sugarless sweets.
Different - Number of categories of ideas for new sugarless sweets; such as, recipes where the sweet is honey, fruit or both, dairy product recipes, recipes with vegetables, etc.
Unusual - One-of-a-kind ideas for new sugarless sweets.

Developed By:

Linda Ennis
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Berlin, New Jersey 08009

INSTITUTE FOR CREATIVE EDUCATION
educational improvement center - south

Abstract for the

Institute for Creative Education

Secondary Curriculum

The Institute for Creative Education, a product of the Educational Improvement Center-South, is a project funded through Title IV-C, ESEA. The goal of the project is to increase students' creative thinking abilities to develop fluent, flexible, original and elaborate solutions to problems or tasks. During its three years of development (1975-1978), the Institute developed a curriculum that was field tested in heterogeneously grouped classrooms throughout South Jersey. This curriculum, which is only available through training, consists of lessons that are directly linked to all subject areas, and are sequentially ordered according to the grade level of the students and the difficulty level of the lessons to teach a creative problem-solving process. During a two to three-day workshop, teachers are trained in the ICE concepts and learn how to facilitate the creativity fostering, divergent thinking lessons with their students.

Available to interested districts is an awareness session, approximately one and one-half hours in length, that provides an overview of creativity and the project. An explanation of the three project components, the curriculum, and those elements that block and foster creativity are presented through various activities that directly involve the workshop participants. Question and answer periods are also included throughout the session.

The attached lessons are a sample of the Institute's high school curriculum. Included are two examples each of the five lesson difficulty levels in a wide variety of subject areas, which are a good representation of how the curriculum teaches the creative problem-solving process.

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609 - 228-6000

The following briefly explains the creativity difficulty scale:

LEVEL	CHARACTERISTICS
I	Brainstorming.
II	Brainstorming, plus content.
III	Brainstorming, plus content, plus restrictions* on expected responses.
IV	Brainstorming, plus content, plus restrictions, plus production of a product.
V	Brainstorming, plus content, plus restrictions, plus production of a product to reinforce specific academic concepts.

In September 1978, the Institute's upper elementary level, grades 4-6, was validated by the New Jersey Department of Education and in July 1979 was granted federal validation by the U.S. Office of Education, Joint Dissemination Review Panel. In October 1979 the Institute for Creative Education was chosen as a Developer/Demonstrator of the National Diffusion Network to conduct dissemination activities throughout the United States.

For further information contact:

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Ms. Monica Steinberg, Field Coordinator

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Educational Improvement Center-South
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*restrictions: ruling out existing solutions thus encouraging creative or new solutions.

Level I
Grade LE - HS

What Is It?

Subject Area: Art

Teacher Introduction:

This lesson is the same as the age-old "game" of having a friend make a scribble which you must make into something.

In motivating children, use the lines on the worksheet, as suggested below, or use a very simple line, such as a curve, for very young students.

Teachers may want to extend the lesson, for the upper elementary students, by asking them to make things out of printed letters of the alphabet.

Student Motivation:

Put one of the patterns of lines from the "What Is It?" student activity sheet on the chalkboard. Ask the class to look at the design carefully. Ask them if the lines suggest an object to them. Allow them to sketch their ideas on the board. When they have shared their ideas, give them four activity sheets with one pattern of lines on each. (Be sure to indicate that the students can have more sheets if they need them.) Tell them they are going to draw many, different, and unusual objects from that one line design.

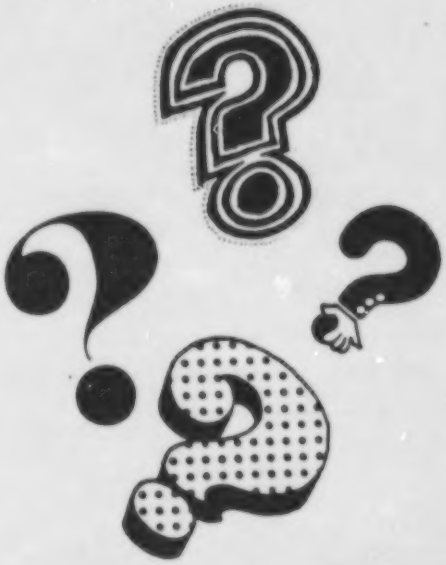
Problem:

The students will draw many, different, and unusual objects from one of the patterns of line designs.

Activities:

1. For ten minutes the students will work individually drawing objects from the patterns of lines. They must make the lines a part of whatever they draw and may add as many lines or colors as they wish.

2. Have the students label their drawings and if they wish let them share their ideas with the class.



3. OPTIONAL FOLLOW UP: The students will work individually drawing objects from printed letters of the alphabet.

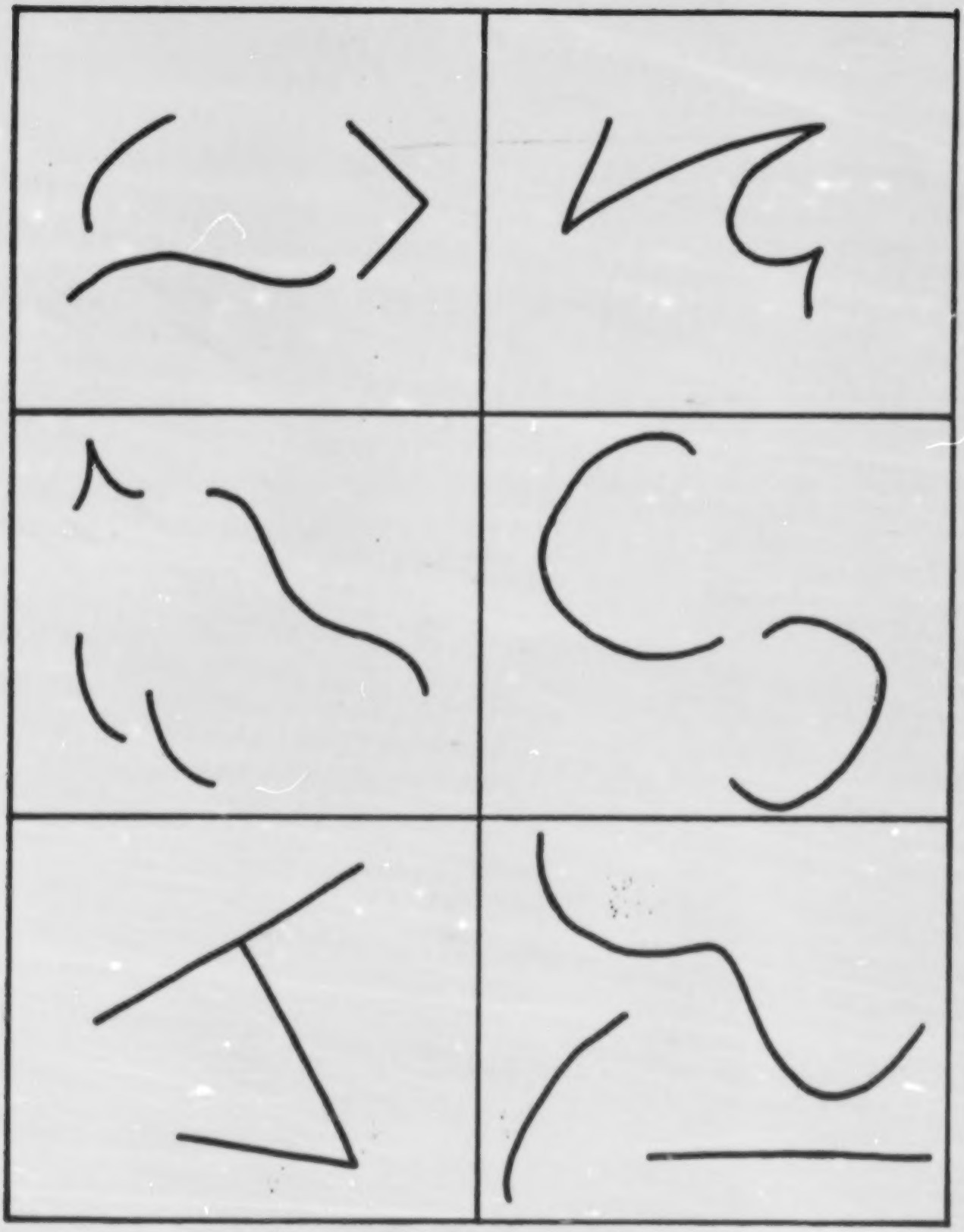
Evaluation:

Many - Total number of objects drawn from the pattern of lines.
Different - Number of categories of objects drawn from the pattern of lines.
Unusual - One-of-a-kind objects drawn from the pattern of lines.

Adapted From:

Talents Unlimited
(An ESEA Title III Project)
Mobile, Alabama

WORKSHEET FOR "WHAT IS IT?"



Level I
Grade UE - HS

Paul Revere's Riotous Ride

Subject Area: Social Studies, Language Arts

Teacher Introduction:

This lesson asks the students to think of many, different, and unusual variations to the historic account of Paul Revere's ride. It will be adequate to briefly review the story of Paul Revere or to have the students read an abbreviated version of the story.

As the students begin to list the many, different, and unusual events that could have prevented Paul Revere from completing his mission, remind them to think about both direct and indirect preventive causes.

Student Motivation:

After reviewing the story of Paul Revere as necessary, say to the students: "What would have happened if Paul had not completed his ride? Can you think of some unusual reasons why he might not have completed it?" (Being unable to talk or not being able to find a horse.)

Problem:

The students will list many, different, and unusual events (direct or indirect) that could have prevented Paul Revere from completing his mission.

Activities:

1. As a class in ten minutes or less, the students will brainstorm for a list of reasons why Paul Revere might not have completed his ride.

2. Each student will select two to five favorite ideas and will write a short story telling how history might have been changed because of Paul Revere's problems.

3. OPTIONAL: The students will dramatize through pantomime Paul Revere's problems or reasons for being delayed.

Evaluation:

Many - Total number of reasons listed.
Different - Number of categories of reasons listed.
Unusual - One-of-a-kind reasons listed.

Developed By:

Jane Engel
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Linwood, New Jersey 08221

Level II
Grade JH, HS

How Snoopy Captures the Red Baron
(Writing Comic Strips)

Subject Area: Language Arts

Teacher Introduction:

This lesson is an interesting and fun way for the students to practice dialogue writing. It could be used independently or in conjunction with units in journalism, the short story, drama, or filmmaking.

Prior to using the lesson, ask the students to bring in comic strips with the dialogue deleted and the frames cut apart.

Student Motivation:

After dividing the students into groups of no more than five students, say to the students:

"We are going to use the comic strips that you brought in to make up new ones based on the same pictures. After rearranging the picture order of the comic strip, each member of the group will work separately to write new dialogues. Think of as many possibilities as you can by changing the situation, or the character role, or the character motivation, etc."

Problem:

The students will list many, different, and unusual dialogues to go with a given comic strip.

Activities:

1. Each student will bring in one or two comic strips of at least three frames each with the dialogue deleted and the frames cut apart.

2. The class will be divided into groups of three to five students. Each group will choose one cut-up comic strip and will arrange the frames in a different sequence. In ten minutes or less, each person will write many, different, and unusual dialogues for the comic strip and will share them with the group members.

3. Each group will select its favorite dialogue and will read it to the class as the frames of the comic are shown under an opaque projector.

Evaluation:

Many - Total number of dialogues written.
Different - Number of categories of dialogues written.
Unusual - One-of-a-kind dialogues written.

Developed By:

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Janet Quirole
Nancy Young
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Level II
Grade HS

Conjugal Visits Included

Subject Area: Social Studies, Psychology

Teacher Introduction:

This lesson concerns itself with a subject that each member of society should be interested in -- prison reform and the rehabilitation of prisoners. For years society has wrestled with the problem of how to punish its criminals for breaking laws. In recent years the science of criminal justice has shown that by isolating and punishing criminals, society tends to produce vengeful individuals who are out to get even with society for the years they spent in jail.

On the other hand, when a jail sentence focuses on rehabilitation, the ex-criminal tends to come out of jail more eager to assume a responsible place in society. Therefore, in order to reduce the repeating criminal syndrome, prisons must develop more of a rehabilitation posture and develop new programs that prepare the inmate to take his place in society.

Student Motivation:

Say to the students:

"Imagine that you are serving a five year jail sentence. Think about the crime you committed and what your life was like before you broke the law. What do you think your daily routine would be like? What things or activities would you wish for? What would your plans be when you get out of jail? What skills will you have to offer employers? Would you be able to have the same kind of job (if you had a job) that you had before you gained a prison record?

Do you think that you would be a lawful person when you get out of jail? Why or why not? Would you want to get revenge? Why or why not? What kind of treatment while in jail would make you respond positively to yourself and your life once you have completed your sentence (or when you have been paroled)? In other words, think of many, different, and unusual changes you would make inside the jails so that the prisoners would be better for their imprisonment."

Problem:

The students will list many, different, and unusual ideas for rehabilitating criminals. These ideas must prepare the criminal for a responsible, well adjusted role in society.

Activities:

1. Prior to this lesson the students will research the current practices of rehabilitation in prisons. This may be assigned during a class period in the library or as homework.

2. The students will next compare the findings with the actual skills and life styles in the free society. Are the rehabilitation programs teaching inmates all that they need upon release?

3. The students will work in small groups to brainstorm, many, different, and unusual new rehabilitation methods.

Evaluation:

Many - Total number of ideas for rehabilitating prisoners.
Different - Number of categories of ideas for rehabilitating prisoners; such as, training for sexual relationships, training for employment, training to succeed in further education, training in good nutrition, training in better use of leisure time, etc.
Unusual - One-of-a-kind ideas for rehabilitating prisoners.

Developed By:

Theodore Gourley
State Department of Education
Trenton, New Jersey 08625

Level III
Grade HS

Angle-O-Belia

Subject Area: Mathematics - Geometry

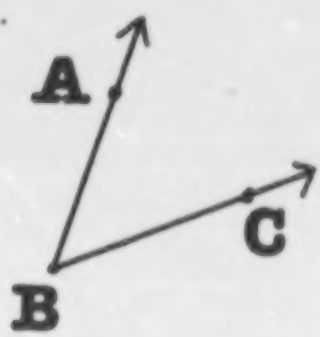
Teacher Introduction:

The ability to identify a particular angle in a sequence of adjacent angles about a point is a necessary skill for all students of geometry. This lesson will help develop these skills to a proficiency level.

Student Motivation:

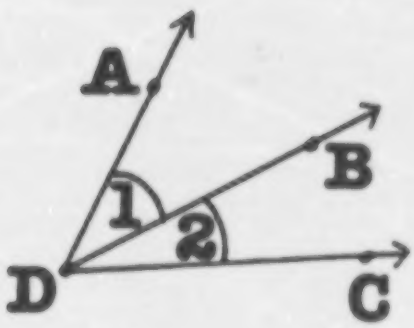
Discuss with the students the method of naming an angle by using two rays which share a common vertex, i.e.

A.



This is ∠ ABC or ∠ CBA

B.



∠1 is ∠ ADB or ∠ BDA

∠2 is ∠ BDC or ∠ CDB

∠1 plus ∠2 is ∠ ADC or ∠ CDA

Problem:

The students will list in many, different, and unusual ways a given angle, within a cluster of adjacent angles about a point in a plane, may be identified according to its relationship to the existing angles.

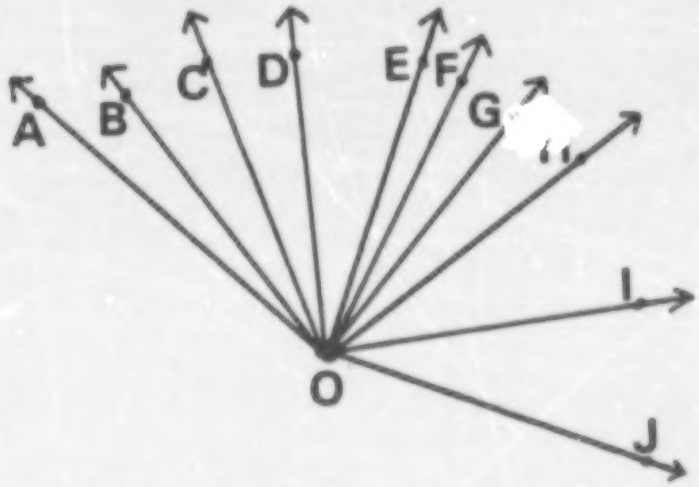
Academic Concepts:

Addition, subtraction, identity, etc., of angles.

Activities:

1. Put a cluster of angles on the board. (See below.) These angles should share the same vertex.

2. Pick one angle (i.e., $\angle$ DOH = ?) and ask the students to list, in ten minutes or less, many, different, and unusual ways the given angle might be identified as it relates to the existing angles.



Possible student responses to $\angle$ DOH = ? might be:

$\angle$ DOH = $\angle$ DOJ - $\angle$ HOJ

$\angle$ DOH = $\angle$ DOE + $\angle$ EOH

etc.

Evaluation:

Many - Total number of responses listed.
Different - Number of categories of responses listed.
Unusual - One-of-a-kind responses listed.

Developed By:

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Atlantic City, New Jersey 08401

Level III
Grade HS

Care-For-Your-World Kit

Subject Area: Science, Technology

Teacher Introduction:

This lesson incorporates the ideas of a first-aid kit, backpacking, and caring for our environment. It asks the students to list the contents, as well as to draw a picture of a kit which will help us care for our world. This could include anything from a cup to help conserve water, to tablets which are placed in water so that the entire water system does not have to be chemically treated, to a gas mask or air spray to breathe clean air or purify air, etc. The weight of the kit should be restricted to fifteen pounds or less and should be compact for easy handling.

Student Motivation:

Discuss with the students the ways in which each of them wastes energy, litters, pollutes, or in any way worsens the environment. Even the smallest "infractions," such as the waste of water from a fountain which is turned on and is run until the water is cold before taking a drink, should be included.

Using the above example of the waste of water, tell the students that they could have saved that water if they had been willing to drink it at a warmer temperature and if they had carried a cup so that water was not being wasted as they drank. Therefore, a cup would help them to conserve. Ask them what else they might carry in a kit to aid the environment.

Problem:

The students will describe and draw many, different, and unusual kits of items which will help to protect and save the environment and which, together, will weigh less than 15 pounds each. The description will include how the items will be packaged for easy carrying. The items will be used to enable the carrier to avoid harming the environment in any way or being harmed by the environment.

Activities:

1. For ten minutes or less, the students will brainstorm for many, different, and unusual items that might be included in an environmental protection kit.

2. The students will draw these items as they would be packaged for easy carrying.

3. The students will share their ideas and drawings with each other when all are finished.

Evaluation:

Many - Total number of items in the kits.
Different - Number of categories of items in the kits; such as, items for conserving water, items for preventing littering, items for breathing clean air, etc.
Unusual - One-of-a-kind items in the kit.

Developed By:

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Level IV
Grade JH, HS

Teaching It Like It Is
(Meeting Real Career Objectives)

Subject Area: Career Education, Language Arts

Teacher Introduction:

In your teacher preparation, you learned how to plan lessons and activities, write objectives, prepare bulletin boards, etc. However, did you have practice in being patient, practice in explaining things, practice in record keeping? Were these or other topics missing from your teacher education? Could you add some humorous items to the list of skills which you were not taught but which you definitely need as a teacher?

Your students will be asked to do just this, to list courses that teach skills used in different occupations but are not taught in any known college or training school.

Student Motivation:

A Future Wilt Chamberlain?

Discuss the reasons for going to school. One of the reasons is to prepare students for lifetime careers. However, schools do not always offer courses to cover all the real skills a person will need in a given occupation. For example, we offer courses on government, law, and public speaking to help prepare a person for life as a politician. However, there are no courses on double talk, handshaking, and other real skills needed by a politician. Ask the students what courses they think would really be relevant to prepare them for life.

Example:

SKILLS NEEDED TO BE A POLITICAL CARTOONIST

I. Sarcasm
   A. Activities to develop:
      1. Clip and mount ten political cartoons and comment beneath on the sarcasm in each; one week.

2. Select a TV personality (such as, Don Rickles, Rodney Dangerfield, Ed Newman, etc.), friend, relative, or acquaintance as an unknowing model of quality sarcasm and tape, memorize or note his/her sarcastic comments; one week, logging five favorites per day.
3. Locate, copy, and memorize three definitions of sarcasm; one day.

II. Artistic Exaggeration

A. Activities to develop:

1. Study personalities to find qualities in character artist may want to exaggerate; one week.
2. Find many, different, and unusual artistic ways to exaggerate characteristics in personalities; one week.

Problem:

The students will list many, different, and unusual courses of study to prepare people for specific careers.
RESTRICTION: The courses may not be real courses currently offered at any educational level. The course outline will include at least five unusual skills needed for a real career and will indicate at least two means of learning each skill and a suggested amount of time in which the student should learn each. The course outline may also include suggested reading.

Academic Concepts:

Educational objectives.
Career education.
Methods of learning.
Outlining.

Activities:

1. With the class, brainstorm and list on the board all the careers or jobs one might have for which there are skills required that are not currently taught.

2. Choose one of these occupations and list at least five skills that would be helpful in that career.

Jimmy Carter?

3. In outline form, note five activities to learn, and/or to practice, each of these skills. If desired, include at the bottom of the outline suggested readings of any kind.

Evaluation:

Many - Total number of skills listed.
Different - Number of categories of skills listed.
Unusual - One-of-a-kind skills listed.

NOTE: Activities (that teach skills) responses may also be counted and categorized.

Developed By:

Theodore J. Gourley
Department of Education
Trenton, New Jersey 08625

Linda Ennis
Berlin Community School
Berlin, New Jersey 08009

Level IV
Grade HS

No Failures in the Voting Booth

Subject Area: Social Studies

Teacher Introduction:

If your students are typical, of not only the average high school class, but also of many young adult Americans, their interest in voting may be slight. They may not know who is qualified to vote, they may not know the issues of any given election at any level, they may not care about the candidates' qualifications.

In the problem below, the students are asked to list qualifications for voting. They will list what people should know, even if they themselves are uninformed. Perhaps this lesson will stimulate your students' interest in the next election and make them more conscious of becoming responsible voters of the future.

Student Motivation:

Direct the class in a discussion of voting rules and regulations. Ask: "How well informed is most of the voting public? Do you believe that it is an informed public who elects our President? Perhaps there should be a test that people must pass to qualify to vote. If there were such a test, should the voting age requirement remain the same? What questions would you ask a would-be voter before granting him/her the right to vote?"

Academic Concept:

Voting procedures.

YOU FLUNK !

Problem:

The students will list many, different, and unusual items for a voting qualifications test. The students will write and draw a sample of the format of his/her test.

Activities:

1. The students will form small groups to brainstorm for many, different, and unusual test questions.

2. The students will then use this list to write or draw a sample of the test that they would give to people who wished to qualify to vote in any United States election.

3. OPTIONAL: Groups will trade tests and complete them, then return the test to its author(s) for grading.

Evaluation:

Many - Total number of test items.
Different - Number of categories of test items; such as, general information, knowledge of domestic affairs, knowledge of local elections, ability to be logical, etc.
Unusual - One-of-a-kind test items.

Developed By:

Robert Francis
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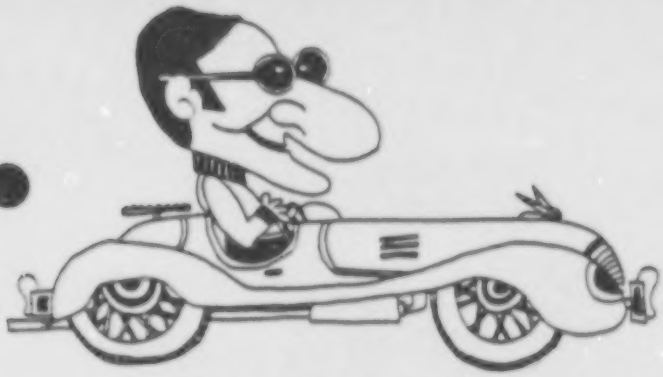


Level V
Grade JH, HS

Aerodynamic Design and Testing

Subject Area: Technology, Science, Mathematics

Teacher Introduction:

This activity will be fun to use in a shop class or hands-on oriented science class. Students who are beginning to be interested in cars, motorcycles, and the speed of vehicles in general will be interested to discover for themselves which shapes, of a hand-made vehicle "body," have the least wind resistance as they move into a fan.

Student Motivation:

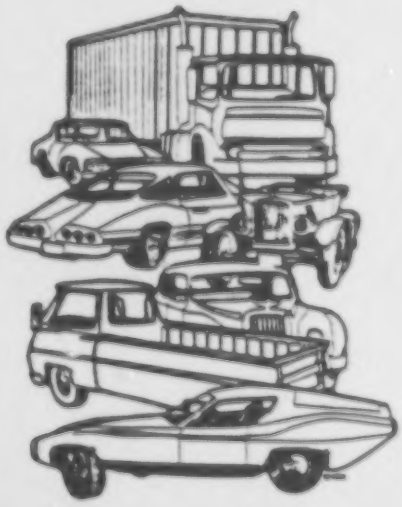
Initiate a discussion of modern car body shapes and the reasons for the shapes. (Brochures from local car dealers can greatly enhance such a discussion.) Ask the students what kinds of shapes have the least resistance to the wind. Ask the students if they know of Bernoulli's Law. If so, call on a student to explain it. If not, inform them that the shape of an airplane wing is so designed that the air rushing over the wing creates a vacuum, or lesser air pressure, so that the air rushing under the wing pushes the plane upward. Ask students whether they can think of any car bodies or parts of a car that incorporate Bernoulli's Law.

Problem:

The students will design many, different, and unusual shapes with minimum wind resistance to be fitted upon a toy car chassis and will test their effectiveness.

Academic Concepts:

Friction.
Wind resistance.
Aerodynamics.
Measurement and design.

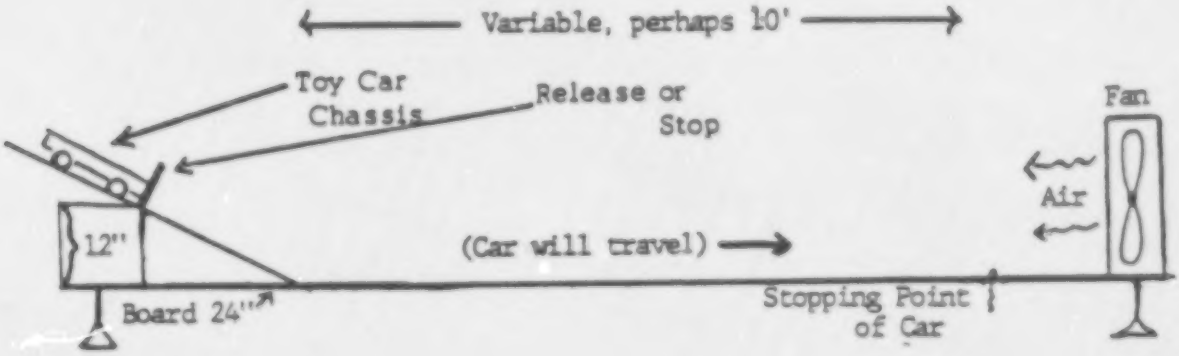


Activities:

1. Utilizing the same chassis from a single toy car, the students will design and construct a series of shapes using exactly three ounces of either clay, styrofoam, or aluminum foil. (All students will use whichever material is decided upon. The styrofoam shapes may be constructed by using scrap styrofoam from packaging, etc. and carving or breaking it up. The pieces will then be glued together, but the shape still must be no more than three ounces in weight and must be able to be fitted on the toy car chassis.)

2. The students will place the car on the chassis and will release it down the ramp in the direction of a fan.

3. The students will compute, in metric measurement, the distance and speed traveled by their cars.



Evaluation:

Many - Total number of shapes designed.
Different - Number of categories of shapes designed; such as, rounded fronts, pointed fronts, flat cars, etc.
Unusual - One-of-a-kind shapes designed.

Developed By:

Samuel Micklus
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Glassboro, New Jersey 08028

Level V
Grade HS

Liquid Sculpting

Subject Area: Art, Science

Teacher Introduction:

There is a close relationship between science and art and often, through the artist's use of chemistry and physics, new materials are created. This is often in evidence in pottery and glass. However, students are too often presented with art and science as two separate, unrelated subjects. The following activity is designed to use the facts and skills of both science and art in a creative format. Students may need to be reminded that one property of liquid is that it conforms to the shape of its container. This lesson is meant to really stretch the imagination, let your students surprise you.

Student Motivation:

Present pieces of sculpture to students, making sure that pieces selected incorporate different materials, such as wood, plaster, metal, paper, etc. After offering a "hands on" examination of the sculptures, ask students to describe the process used to create the piece (carving, cutting, molding, etc.). If you cannot obtain sculpture, show the class pictures and discuss them. Ask the students to describe what is similar about the materials, making sure they realize that all are fairly solid/dense.
Then say to the students:
"Today you will get the chance to create your own sculptures in a very unusual way. The sculpture's basic material will be liquid."

Problem:

The students will develop many, different, and unusual ways to create a piece of sculpture using liquid as the basic material. RESTRICTIONS: The liquid and temperature cannot be below 0° centigrade, the liquid must be 80% water, (the sculpture must hold its shape without benefit of forms, molds, containers for a minimum of 30 seconds) and the shape, size, etc., of the sculpture must be predetermined by the student prior to beginning the project.

Activities:

1. The students will review the properties of water and, in ten minutes or less, develop many, different, and unusual ways to create a piece of sculpture by making the water assume a stable shape.

2. The students will design a form that the water must assume and from that design construct the liquified sculpture, making sure to adhere to the conditions of the problem.

Evaluation:

Many - Total number of ways to create liquid sculpture.
Different - Number of categories of ways to create liquid sculpture.
Unusual - One-of-a-kind ways to create liquid sculpture.

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Teaching The Gifted & The Talented

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MACBETH AND SYNTAX

SUBJECT AREA

Language Arts

OBJECTIVES

Students will be able to make their own generalizations concerning Elizabethan grammar.

DESCRIPTION

Here is an example of how grammatical patterns may be studied in conjunction with Shakespeare.

ACTIVITIES

A. Syntax of Elizabethan questions.
Consider the structure of the following questions. Do some of them sound unnatural according to the pattern of modern language? Mark an X by each that sounds unnatural, and O by those that sound like contemporary questions.

___1. Saw you the weird sisters?
___2. What is it that moves your highness?
___3. Did Heaven look on?
___4. Goes Fleance with you?
___5. Is it far you ride?
___6. Was it not yesterday that we spoke together?
___7. Have you considered of my speeches?
___8. What's to be done?
___9. But who did bid thee join with us?
___10. Is he dispatched?
___11. Which of you have done this?
___12. Do you mark that?
___13. Are you a man?
___14. Why do you make such faces?
___15. Did you send to him, sir?
___16. Sent he to Macduff?
___17. Who's there?
___18. Came they not by you?

Rewrite each question that you marked with an X.

Can you draw any conclusions about how the pattern of some Elizabethan questions differ from modern questions? How does the modern speaker form questions?

Conclusions or generalizations

1.

2.

B. Verb forms - morphology

Consider the underlined verbs in each of the following sentences. Can you draw any conclusions about the use of the st and the th endings? Are they interchangeable? Do they indicate a difference in person? In number? In tense?

1. Thou wouldst be great.
2. Didst thou not hear a noise?
3. Your constancy
   Hath left you unattended.
4. Glamis hath murdered sleep.
5. This murderous shaft that's shot
   Hath not yet lighted.
6. Thou hast it now.
7. My lord is often thus
   And hath been from his youth.
8. If you canst nod, speak too.
9. Thou still hast served.
10. Blood hath been shed ere now, in the olden time.
11. Thou comest to use thy tongue.

Conclusions or generalizations

1.

2.

C. Pronoun forms

Consider the underlined pronouns, thee and thou. Are they interchangeable? Is there a difference in their number: singular or plural? In person: first, second, or third? In case: nominative or objective or possessive?

1. I have begun to plant thee and will labor
   To make thee full of growing.
2. Let me enfold thee
   And hold thee to my heart.
3. Glamis thou art.
4. Thou wouldst be great.
5. Get thee to bed.
6. Yet I see thee still.
7. Art thou but a dagger of the mind?
8. Didst thou not hear a noise?
9. I would applaud thee.
10. Drink gave thee the lie last night.

Conclusions or generalizations

1.

2.

VARIATIONS

Have students translate one of their modern conversations into Elizabethan language. Stage and present in modern setting if desired.

SKILLS BEING DEVELOPED

Analysis, application, synthesis, evaluation.

CONTRIBUTED BY

Mary Commers, Chairperson of English, Lincoln Southeast High School, Lincoln, Nebraska.

BABY BAN

SUBJECT AREA

Language Arts

OBJECTIVES

Students will be able to recognize and carry out the different levels of thinking in Bloom's taxonomy.

DESCRIPTION

You as the teacher can (AND IN FACT SHOULD) apply the six levels of thinking advocated by Bloom, and their several component behaviors, to all the content areas. If you do not integrate these skills for and with the students, the students will not internalize the skills and be able to transfer them in other learning situations in and out of school.

The students must be made to see that these skills are components of thinking. We are learning them (KNOWLEDGE) in a practice situation so they can be used in all other situations (APPLICATION). Otherwise, the knowledge itself will never be applied.

ACTIVITIES

Below is an article which appeared in The New York Post this September. This article can be used as a reading/language arts activity with follow-up questions and/or a discussion. The questions illustrate practice and integration of the six levels of thinking.

BABY BAN GIVES BIRTH TO SUIT

LOS ANGELES (AP)--Steve and Lois Wolfson like their apartment overlooking a yacht harbor at Marina del Rey, and they say they're not about to leave just because they have a baby.

For almost a year, they ignored an eviction notice issued after their landlord established a ban on children.

Now they have asked Judge Harold L. Cherness of Culver City Municipal Court to rule on a suit they brought to keep the $390-a-month apartment. Testimony begins today.

Mrs. Wolfson said nobody objected for more than a year after she brought Adam home from the hospital in September, 1975.

"We've never had any complaints about Adam," Mrs. Wolfson said. "In fact, all of our neighbors have signed affidavits saying they like him and want him to stay in the building, and they're appearing in court on our behalf."

In November, 1976, after the Wolfsons had signed a lease renewal, they got a letter from their landlord, Marina Point Ltd., telling them they would have to leave because of the baby. They chose to fight eviction.

"We love it here. It's a terrific buy," Wolfson said. "There's a great view of the marina from both bedrooms."

Several other children already live in the apartment complex. They lived there before the ban was imposed.

"The children from adjacent buildings who come over to play in front of this one are a lot noisier than Adam's ever been," said a neighbor, Robert Smith.

Discussion:

1. Describe the problem the Wolfson's are now having with their apartment.
   (LEVEL 1: KNOWLEDGE)

2. Summarize why the Wolfson's have refused to leave their apartment.
   (LEVEL 2: COMPREHENSION)

3. Show what the article states people like the Wolfsons can do to avoid being evicted from their apartment.
   (LEVEL 3: APPLICATION)

4. Fill in with two words from the beginning of the article that mean almost the same as the underlined word:
   (LEVEL 4: ANALYSIS)
   "There's a great view of the marina from both bedrooms."

5. Find at least five words in the article that we can associate with being in court.
   (LEVEL 4: ANALYSIS)

6. Differentiate between the meaning of the word "suit" as "a matching outfit or set of clothing."
   (LEVEL 4: ANALYSIS)

7. Predict the possible outcomes of the Wolfson's suit.
   (LEVEL 5: SYNTHESIS)

8. In the Wolfson's case, the landlord is trying to evict them because they have a baby. Substitute other reasons why landlords try to evict tenants.
   (LEVEL 5: SYNTHESIS)

9. If you were the judge in this case, how would you decide or solve the case?
   (LEVEL 6: EVALUATION)

Writing:

Integrating these skills with creative writing ir easy. Here are some sample assignments at each level.

LEVEL ONE: KNOWLEDGE

You are the largest tree in Central Park. Describe what you have seen.

Write a descripiton of a person you know.

LEVEL TWO: COMPREHENSION

You are lying on the bank of a stream watching your fishing line. Suddenly you hear a rustle in the leaves behind you. You jump up. Describe in your own words what happens next.

You have just invented a new toy for children. Organize your advertising campaign.

LEVEL THREE: APPLICATION

Construct the type of transportation we might use in the year 2000.

LEVEL FOUR: ANALYSIS

Combine the characters "Fonzie" and Richie of "Happy Days" into one new character. What qualities would this character have and how would he act.

Isolate one of "Fonzie's" qualities or characteristics. Give that quality to Cinderella. How would that change the story?

LEVEL FIVE: SYNTHESIS

You are the pilot of a large transcontinental jet airliner which has just taken off from an airport. Suddenly you notice that one engine is on fire. Predict what happens.

Take the story of Cinderella. Substitute the Prince for Cinderella and Cinderella for the Prince. Tell how the story would be different.

LEVEL SIX: EVALUATION

You have just been told by your doctor that you will be blind in two days. You have only two days to see. Decide how you will spend your last two days of sight.

SKILLS BEING DEVELOPED

All levels, Bloom's Taxonomy.

CONTRIBUTED BY

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DICK AND JANE

SUBJECT AREA

Language Arts, Social Studies, Psychology

OBJECTIVES

Too numerous to list!

DESCRIPTION

Here are several ideas which could be used with a unit on societal sex roles. Also available from the contributor is an excellent bibliography.

ACTIVITIES - From Learning Magazine

1. Write a report or make a booklet on "Women in Advertisements" or "Men in Advertisements." Select several advertisements from television, magazines or radio, and use them to show how women or men are viewed by the people who create advertisements.

2. Make a collage of advertisements using these appeals.

3. Analyze the advertising appeals of the ads in at least one popular women's or men's magazine. Include in your analysis only those ads covering one-half page or more, because smaller ads often are straight-forward presentations of information and these ads usually do not include obvious advertising appeals. Tally your findings (how many ads are based on what kinds of appeals) and present them in chart form.

4. Do a comparative analyses of advertising appeals directed toward men or toward women in two different magazines (Sports Illustrated versus Newsweek, for example, or Ms. magazine versus McCall's). Do advertising appeals directed at a given sex differ, depending on the magazine? What do such differences tell you about the audience for whom each magazine is intended? Tally your findings and present them in chart form.

5. In at least one textbook used at your school, analyze content in terms of number of male illustrations versus female illustrations. Tally, too, the adult occupations given for males and females. Note any specific examples of portrayals of boys or girls in nontraditional roles or of content in which either sex is "put down." Make a chart of the results.

6. Analyze the story problems in a math book used at your school. What activities are women and girls, men and boys, engaged in? Draw conclusions and present your findings to the class.

7. Make a bulletin board display of men and women engaged in non-stereotyped activities or of "breakthroughs" for either sex. Use pictures and articles from current newspapers and magazines for this purpose. (Recent examples: an article about the new female state troopers in Indiana; a feature story about a man on a city's women's commission; an article on fathers who have received custody of their children following a divorce; a news item about the first female cadets at West Point.)

8. Give an oral report on women's rights from the suffrage movement to the present. Discuss past and current leaders in this movement, the date of women's right to vote in national elections, tactics used to gain this privilege, arguments used against women's suffrage. Compare the way the suffrage movement began to the way the current women's movement began, and note the connection, in both instances, with civil rights for black Americans. Mention other similarities between the women's movement of the 1800's and the current one. (Example: the formation of liberal and conservative fractions expressing different goals and using different tactics.) List some unattained objectives of the current women's movement; discuss sources of opposition to these objectives.

9. Prepare a written or oral report of the status of women in politics today. Find out, for example, what percent of eligible women voters actually have registered to vote. How many women are elected officials in the U.S. Senate and House of Representatives, state legislative bodies, governorships? How many women have held important judgeships or high office (cabinet posts, for example) in the federal government? Who are the outstanding female politicians today, and what is the outlook for women in politics in the future? (Note: "Women in Politics: An Overview" by Dixie Shipp Evatt is an excellent article that covers these points. It appeared in the spring of 1976 issue of Matrix. Information on reprints can be obtained from Matrix, Women in Communications, Inc., 8305-A Shoal Creek Blvd., Austin, Texas 78758.)

10. Prepare a written or oral report comparing sexism to racism. One source of information is the National Education Association's Fact Sheets on Sex Role Stereotyping. (Note: Write to the National Education Association, Order Department, The Academic Building, West Haven, Connecticut 06516 for information on obtaining these Fact Sheets, which are listed as Stock No. 0585-6-00.) You might also interview black women in the community, asking them about the problems of race and sex discrimination.

11. Prepare a talk about a woman famous in some profession. Emphasize any obstacles (including those related to sex) this woman had to overcome in order to reach her position of leadership or personal success. If she faced no serious obstacles, how do you account for this? Mention her family's attitudes toward her career, along with problems or special strengths she may have had.

12. Interview an influential career woman in your community. Ask questions such as: How did you become interested in your career? How did your family feel about your going into this kind of work? What obstacles did you have to overcome? Do you feel there has been discrimination against you in terms of your salary, advancement, job responsibility? Are you married? If so, does your work affect your family life? Do you recommend that other women follow in your footsteps?

13. Design a flag or banner as a symbol for people's rights in a non-sexist society.

14. Create a mural on sex-role stereotyping of males, females, or both.

15. Write and present a play. Possible themes include a typical day in the life of a modern man or woman, life for men or women 20 or 30 years from now, a historical incident in the suffrage movement.

16. Write poems or short stories on such subjects as how parents train children to "act like" men or women, or ways in which society expects males and females to behave.

17. Survey the career plans of girls and boys in kindergarten (or first grade) and those of students in fourth grade. Is there a difference? Are choices sex-stereotyped?

18. Ask Junior High boys what they want to be when they grow up. Then ask what they would want to be if they were girls. Follow a similar procedure with girls at that grade level. Do career choices change when children "become" members of the opposite sex? Is the range of career choices broader for one sex than the other (either as the interviewee's real or imagined sex)? Is there evidence of sex-role stereotyping in career choices? If so, are boys and girls more stereotyped in thinking about careers for their own sex or for the opposite sex? Analyze your findings and arrive at some conclusions.

19. Survey the favorite school subjects of boys and girls in an early grade and compare these with the favorite school subjects of children in later grades. Is there a difference? Do girls generally prefer language activities to math, social studies, to science (and boys, the reverse) as is popularly supposed? Present findings in chart form.

20. Find ten or more quotes about sex roles. (Bartlett's Familiar Quotations is a good source.) Note both the quote and the speaker's name, and explain the meaning and significance of each quote.

21. Collect adults' cliches (common, stereotyped expressions) about men and women. (Example: Men are logical; women are intuitive.) Lead a discussion on the validity or refutability of each of these expressions.

22. Choose one children's cartoon series on television and watch it at least four times. How are male and female characters portrayed on the show? In one or two words, how would you describe each character as he or she is portrayed (intelligent, stupid, courageous, aggressive, helpless, strong, weak)? Draw some conclusions, using examples to support them.

23. Watch one family situation comedy on television for several weeks. How do the roles of fathers and mothers, sons and daughters, on the show compare with family life as you know it?

24. Write a proposal or outline for a television show or children's book that you think would give children a constructive view of men and women.

25. Choose one comic strip or syndicated cartoon series from the newspaper. Look at ten or more separate cartoons or read the strip for two weeks. Then characterize the males and females shown in the cartoon or comic strip. Using an opaque projector or photocopy machine, provide at least one illustration to accompany the report of your conclusions.

26. Listen to popular music on the radio. How are men and women depicted by writers of song lyrics? Write a report, using examples to support your conclusions.

27. Using a familiar tune, write a new song for people in a nonsexist society.

28. Analyze the depiction of males and females in the library books you have read during the past several months. Is there sex-role stereotyping? If so, is such stereotyping justifiable--for example, in historical fiction, where the author's purpose is to "tell it like it was"; or in traditional literature, which is the written version of folk stories handed down from generation to generation? Is such stereotyping legitimate in modern, realistic fiction? Why or why not? Present your findings and conclusions in an oral report or a written critique.

29. Select a random sample of picture books from a children's library. (Taking every 10th or 20th or 40th book is a good way to do this.) Tally the number of books that have boys or male animals as main characters versus those with girls or female animals. Which sex predominates? Why do you suppose that might be? If you separate your sample into books published before 1970, is there a change toward equal representation of both sexes in the more recent books? If so, why might that be? Analyze your findings and draw conclusions.

30. Look at some teachers' (or librarians') book list that separate books suggested for boys from those suggested for girls. (Two such lists are G. Robert Carlsen's Books and the Teen-Age Reader, 1971, pp. 51-57; and George D. Spache's Good Reading for Poor Readers, 1970, pp. 59-63 and pp. 71-74.) Do you think such sex-differentiated lists

of reading materials are valid? Why or why not? Present your findings and conclusions orally or in writing.

31. Ask girls in a lower grade if they've ever wanted to be boys, and if so, why? Ask boys in the same grade if they've ever wanted to be girls, and if so, why? Then ask the same questions of boys and girls in a higher grade. Which sex seems more satisfied, overall, with its sex-role identity? Does this satisfaction decrease with age for either boys or girls? If so, why might this be? Analyze and present your findings.

32. Visit the toy department of a local store and list toy packages that show girls only, and those that show boys only. Also note those showing children of both sexes. Draw some conclusions from your findings and present them to the class.

33. Invite to your class a guest speaker who represents a nonstereotyped role (a man or woman in an atypical job or an atypical family role). Plan to meet with your guest before the talk to confer with him or her about topics to be covered. Introduce the guest to the class.

34. Use a camera to put together a picture story about a typical day in the life of some person, man or woman, who holds a nontraditional job. Mount your pictures for display; ad captions if you wish.

35. Analyze some aspect of news coverage. Examples: column inches devoted to girls' sports versus boys' sports; ways in which men and women are referred to in headlines; how often a woman's--as compared to a man's--marital status, number of children or physical description is referred to in news stories. Present your findings in chart form, and draw some conclusions.

36. Analyze greeting cards. Compare cards congratulating parents on the births of male infants with those referring to female infants. Or look at birthday cards written for boys and those written for girls. Do differences exist? What kinds? Tally your findings and present them to the class.

37. Ask students from Junior High to write the first three adjectives they think of when you say "masculine." Have them do the same thing for the word "feminine." Tally your findings, present them to the class, and draw some conclusions. At the end of this activity, you might want to try the same thing with your own classmates and the younger students. If so, how do you account for these differences?

38. Visit several classrooms in your school. Examine the wall and bulletin board displays, tallying the number of males and females shown in each. Total your figures. Does stereotyping seem to be practiced? If so, discuss with your teacher and/or several classmates what might be done to remedy the situation.

39. Working with several partners, list all the things that only a father can do for a child. Finally, list all the things that only a parent can do for a child. Compare your lists, and draw some conclusions to present to the class.

40. Analyze the content of a science textbook used at your school. Tally the number of girls shown participating in science activities versus the number of boys. Does one sex tend to be doing while the other sex is watching? Is there a marked difference in the kinds of activities girls are shown doing versus those boys are shown doing? Tally the number of male teachers in illustrations versus female teachers. Look, too, at biographical information about scientists, past and present. How many of these practicing scientists are men? How many are women? Analyze your findings and draw some conclusions.

41. Read Barbarous Rituals in Sisterhood is Powerful. Create a Barbarous Rituals for men.

42. Reverse some stereotypes in advertising, writing and illustrating your own ads.

43. Write and illustrate a non-sexist children's book.

44. Examine past and current issues of Seventeen Magazine. Note unstated assumptions, innuendo, subtle pressure. Note in five ads how body functions are exploited. Choose a recurring theme and exploit it. Choose your own way to demonstrate what you have learned.

45. Do the same thing with Playboy Magazine.

46. Sit in a public place and observe male/female couples. Rank according to attractiveness. Any correllations? Patterns? Did any combination offend you? Why or why not? Organize and present your data effectively.

47. Construct and teach an anatomy lesson using only the facts you can get from babydolls.

48. Do a project of your own choosing. Check your idea with your teacher.

Subject headings to be used for locating materials for "Dick and Jane Dilemma: Femininity and Masculinity"

Abortion
Bio-ethics
Birth Control
Celibacy
Communes
Dating (social customs)
Divorce
Desertion and non-support
Domestic relations
Ethics
Family
Family life education
Free love
Home
Love
Marriage, Mixed
Marriage customs and rites
Manners and customs
Reproduction
Rites and ceremonies
Sex
Sexual behavior
Sexual ethics
Sexual hygiene
Sex instruction
Venereal diseases

Boys
Children
Discrimination in employment
Education of Women
Family
Fathers
Girls
Liberation
Man
Men
Men's Liberation
Mothers
Occupations
Policewomen
Prostitution
Sex discrimination
Single Women
Social Problems
Widows
Woman
Woman-Psychology
Woman-Social Conditions
Woman-Employment
Woman-Biography
Woman-Civil Rights
Woman-Suffrage
Women
Women as artists
Women as authors
Women as physicians
Women as scientists
Women in aeronautics
Women in literature and art
Women in public life
Women in the U.S.
Women's Liberation Movement
Young Men
Young Women
Youth

CONTRIBUTED BY

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THE NATURE OF REVOLUTION

SUBJECT AREA

Social Studies

MATERIALS

1. Films

a. Marx Was Here. Produced by the BBC. Time-Life Films, Chicago.
b. The World Turned Upside Down (The Story of the Russian Revolution). Produced by the BBC. Time-Life Films, Chicago.
c. The French Revolution. Part I: The Death of the Old Regine and Part II: The Birth of a New France. Produced by NBC. Encyclopedia Britannica Educational Corporation, Chicago.

2. Filmstrips - All filmstrips are in color and have cassettes and recordings.

a. The French Revolution (2 filmstrips). EAV Productions, Pleasantville, New York.
b. The Russian Revolution (2 filmstrips). EAV Productions, Pleasantville, New York.
c. The 1848 Revolutions (2 filmstrips). EAV Productions, Pleasantville, New York.
d. The Ideas of Karl Marx (2 filmstrips). EAV Productions, Pleasantville, New York.
e. Pepys's London (1 filmstrip). EAV Productions, Pleasantville, New York.
f. The American Revolution: Two Views (4 filmstrips). EAV Productions, Pleasantville, New York.
g. Great Episodes in British History: The Puritan Revolution (1 filmstrip) Encyclopedia Britannica Educational Corp., Chicago.
h. Continental Europe in Revolution (1789-1890) (7 filmstrips). Encyclopedia Britannica Educational Corp., Chicago.

3. Bibliography

Adams, Brooks	The Theory of Social Revolutions
Amann, Peter (ed.)	The Eighteenth-Century Revolution
Arendt, Hannah	On Revolution
Artz, Frederick	Reaction and Revolution, 1814-1832
Beals, Carelton	The Nature of Revolution
Breuning, Charles	The Age of Revolution and Reaction, 1789-1850
Brinton, Crane	The Anatomy of Revolution
Burke, Edmund	Reflections on the Revolution in France
Burns, C. D.	The Principles of Revolution
Carswell, John	The Descent on England: The English Revolution
Chamberlain, W. H.	The Russian Revolution, 1917-1921
Dahl, R. A.	After the Revolution: Authority in a Good Society
Davies, J. C.	Human Nature in Politics
Dowd, D. L. (ed.)	The Age of Revolution, 1770-1870

Duveau, Georges	1849: The Making of a Revolution
Eastman, Max	Marx, Lenin, and the Science of Revolution
Edwards, L. P.	The Natural History of Revolution
Engels, Frederick	The German Revolutions
Forster and Greene	Preconditions of Revolution in Early Modern Europe
Gasset, Jose Ortega	The Revolt of the Masses
George, C. H.	Revolution: European Radicals from Hus to Lenin
Gershoy, Leo	The French Revolution, 1789-1799
Gipson, L. H.	The Coming of the Revolution, 1763-1775
Greenlaw, R. W. (ed.)	Economic Origins of the French Revolution
Hill, Christopher	Intellectual Origins of the English Revolution
Hyndman, H. M.	The Evolution of Revolution
Knollenberg, Bernhard	Origins of the American Revolution, 1759-1766
Koehan, Lionel	Russia in Revolution, 1890-1921
Kohn, Hans	Revolutions and Dictatorship
Le Bon, Gustave	The Psychology of Revolution
Lefebvre, Georges	The Coming of the French Revolution
Lenin, V. I.	The State and Revolution
Lubasz, Heinz (ed.)	Revolutions in Modern European History
Maguire, J. J.	The Philosophy of Modern Revolution
Mazlish, Kaledin and Ralston	Revolution: A Reader
Meisel, James	Counterrevolution: How Revolutions Die
Miller, J. C.	Origins of the American Revolution
Palmer, R. R.	The Age of the Democratic Revolution
Pottes, G. S.	The Process of Revolution
Rude, George	The Crowd in the French Revolution
Sievers, A. M.	Revolution, Evolution, and the Economic Order
Sorokin, P. A.	The Sociology of Revolution
Sydanham, M. J.	The French Revolution
Taylor, P. A. M.	The Origins of the English Civil War
Tocqueville, Alexis de	The Old Regime and the French Revolution
Toynbee, A. J.	America and the World Revolution
Trevelyan, G. M.	The English Revolution, 1688-1689
Trotsky, Leon	The History of the Russian Revolution
Tucker, R. C.	The Marxian Revolutionary Idea
Venturi, Franco	Roots of Revolution
Wolfstein, E. V.	The Revolutionary Personality

OBJECTIVES

The student will be able to:

1. Differentiate between forms and types of revolution (i.e., coup d'etat, palace revolt, civil war, insurrection) (C1; A1,4)

2. Identify the primary causative factors which lead to revolution (i.e., social, political, economic, intellectual) (C2,3)

3. Gain the ability to make generalizations concerning the nature of revolution derived from a study of facts (C3,4; A4)

4. Understand the causes and effects of revolution under different forms of government (i.e., monarchies, republics, aristocracies, democracies) (C4,5)

5. Discover the difference between overt and hidden motives involved in revolution and those who plan and execute the action (C4,5; A1)

6. Analyze and weigh evidence as he searches for the truth (C3,4,6; A2,3)

7. Reveal the problems of man in modern society, to analyze his present feelings, and to plot his probable path to the future through a study of four revolutions (the English, American, French, and Russian) (C2,3,5,6; A5)

8. Develop, through the study of specific revolutions, a knowledge of values which have stood the test of time (C5,6; A3,5)

ACTIVITIES

1. All students will view the NBC-produced film, "The French Revolution," as an overview of the unit. By observing this film, students will realize the total scope of a revolution and thus be better informed as to basic causes and effects.

2. The class will utilize a combination of learning techniques throughout the entire unit. These include: lecture, group assignments, individualized instruction, oral and written reports, debates, and simulations.

3. Textbook readings (Palmer and Colton: A History of the Modern World), bibliographical selections (see: Bibliography), and other materials (periodicals and audio-visual aids) will be assigned throughout the entire study period.

4. Each student will prepare a comparative list of the major figures, describing the work and significance of each, who were responsible for the organization and implementation of the English, American, French, and Russian Revolutions.

5. Each student will prepare a visual project (i.e., poster, transparency, bulletin board) in which emphasis is placed upon intellectual ideas which promoted revolutionary activities in one of the four societies under consideration.

6. Each student will become acquainted with the works of several historians (suggested number :5) whose theories concerning any of the four revolutions to be studied seem worthy of consideration. Each theory will be critically analyzed and evaluated. Then the student will organize the four or five theories into a well-prepared essay, formulating a concise and succinct synthesis of his findings.

7. The class will be divided into four groups. Each group will prepare a debatable research paper to be presented to the entire class. The four issues which will be presented are to be built around the following questions:

a. Was the French Revolution a Western revolution?
b. Were the Marxists revolutionaries or reformers?
c. Was the American Revolution a "true" revolution?
d. Was the English Revolution politically motivated or religiously inspired?

8. The class will be organized into four tables, each table of four students assigned to a particular theory of revolution (i.e., loss in warfare, common grievances, corruption in leadership). Each table will defend or attack the theory, producing evidence which will support its contention.

9. Small groups (three or four students) will critique films and filmstrips in an attempt to determine whether propaganda instruments or subjective methods were used in producing the visual.

10. Using the Great Books of the Western World, the students will organize into pairs and attempt to understand and analyze the various concepts of revolution as presented by eight philosophers: Aristotle, Hegel, Hobbes, Kant, Mill, Rousseau, and Thucydides. The students will then present for small and large group discussion and argument, the ideas of these men.

11. A written dialogue, solving the following problem, will be prepared by each student:

Time: 1513
Location: Florence
Situation: Florence is engaged in a series of violent activities on the part of several families, notably the Medici, in an effort to gain political control of the city-state.
Problem: The student will develop a conversation between the three persons in one of the groups below. The dialogue will center around how to solve the tense situation and bring political stability to Florence.

a.	b.	c.
Machiavelli	Henry VIII	Charles V
Locke	Louis XIV	Alexander II
Plato	Frederick II	Joseph II

d.	e.
Lenin	Trotsky
Hitler	Robespierre
Wilson	Bakunin

12. A role-playing dilemma is performed in which an effort to solve the following problem takes place:

Time: 1513
Place: Florence
Situation: Florence is engaged in a series of violent activities on the part of several families, notably the Medici, in an effort to gain political control of the city-state.
Problem: The students will divide into five groups of three persons each. The student will assume the role of the one character with whom he wishes to identify. Each student will then become familiar with the social and political thoughts of that one

historic figure and be willing to defend the character's views pertaining to the situation as it exists in Florence.

a. Machiavelli	b. Henry VIII	c. Charles V
Locke	Louis XIV	Alexander II
Plato	Frederick II	Joseph II
d. Lenin		e. Trotsky
Hitler		Robespierre
Wilson		Bakunin

Questions for Discussion

1. Compare and contrast the Puritan Revolution and the Glorious Revolution.

2. Why did not the oppressive policies of the despots lead to revolution everywhere instead of simply in France and England?

3. Why did absolutism decline in England at a time when it was rising on the continent?

4. Upon what grounds does Thomas Hobbes justify absolute government?

5. What part did the rights of the people play in the English Revolution?

6. "In its origin and initial objectives the French Revolution was essentially a middle-class movement." Substantiate or refute this statement.

7. Compare in as many ways as you can the American Revolution with the French Revolution. On the basis of your knowledge of the French Revolution, would you consider the American Revolution a true revolution?

8. In what ways and to what extent was the American Revolution a cause of the French Revolution?

9. "The French Revolution made the career of Napoleon inevitable." Prove or disprove this statement.

10. Compare the French Declaration of the Rights of Man with the English Bill of Rights.

11. What do the food riots tell us about the role of the lower classes in the French Revolution?

12. Study the Constitution of the United States and see what features you can discover in it that were really original and not derived from English and French political theory and from English institutions and practices.

13. Compare the actualities of the Bolshevik revolution in Russia with the Marxist theory of revolution.

14. Was Lenin justified in affirming the existence of a Communist morality?

15. Why did Lenin deny the possibility of freedom so long as the State exists?

16. "The Puritan Revolution, like others, produced its extremists." Explain and identify.

Evaluation

1. Each student will construct a paper comparing the English, American, French, and Russian Revolutions. Stress must be placed on the ability to analyze and synthesize facts and develop them into a well-organized and cohesive essay. This essay should be designed to pursue and describe the similarities unique to all revolutions.

2. Historians usually propose and then defend a thesis as to what is felt to be the most valid factor behind a revolution. The class will be divided into pairs of students. Each pair will be asked to prepare oral arguments attacking and defending one thesis used by one of these historians.

3. A hypothetical state, New Atlantis, will be established in which conditions will be "ripe for a revolution." The students will engage in role-playing positions, pro and anti-establishment, in which they will propose solutions to alleviate or eliminate the irritants which are the source of major grievances. This simulation will be the culminating activity of the study unit and the outcome of this activity will serve as a springboard into the next unit. "Individualism and Nationalism: The Two Political Horns of the Nineteenth Century."

SKILLS BEING DEVELOPED

C1, A1, etc., refers to the nature and level of the objective as described by Bloom and Krathwohl. C1 is an objective in the cognitive domain at the 1st or knowledge level; A1 is an objective in the affective domain at the 1st or awareness level.

Cognitive:	Affective:
1. Knowledge	1. Receiving
2. Comprehension	2. Responding
3. Application	3. Valuing
4. Analysis	4. Organization
5. Synthesis	5. Characterization
6. Evaluation	

CONTRIBUTED BY

McLean Mitchell, Forsyth Country Day School

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RIGHTS OF JUVENILES BEFORE THE LAW

SUBJECT AREA

Social Studies

MATERIALS

Documents of American History, Commager, Henry S., Appleton Century Crofts, New York, New York (no date available).

The Pursuit of Justice, Bragdon and Pittenger, Macmillan Co., New York, New York (the teachers' edition is especially useful) (no date available).

OBJECTIVES

Students will become familiar with their rights as juveniles.

DESCRIPTION

This is an outline of a unit which is centered around the study of the famous Supreme Court case of In Re Gault 1967, which many authorities feel helped to bring about a revolution in students' rights.

ACTIVITIES

I. Historical background
II. General Procedures of Juvenile Courts
III. The case background of In Re Gault
   Each student reads the details of the case.
IV. Procedural Guarantees that Adults Have
   A. The right to counsel
   B. Trial by jury
   C. Written statement of charges
   D. Ability to confront and cross examine witnesses
   E. Stenographic records of the hearings in the judge's chambers
V. Due Process
   Should minors be entitled to due process?
VI. The Decisions Handed Down by the Students in the Class
   These are turned in to the teacher and they are read to the class
VII. Summary of the Supreme Court of the United States Decision
   A. Majority opinion
   B. Minority opinion
VIII. The Nature of Due process That Students Have Before the Law
   A. The right to a formal and timely notice of charges
   B. The right to counsel
   C. The privilege against self-incrimination
   D. The right to confront and examine witnesses (In this case, the right of the Gaults to compel a witness to be in court and question her about the telephone call on which the prosecution was based.)

IX. Questions for Discussion

A. Did the decision of the Supreme Court destroy the usefulness of the juvenile court system?

B. Would publicity about delinquents deter misconduct?

C. Should juvenile proceedings be closed to the public?

D. Should there be teenage juries which would make recommendations to judges on the appropriate punishment for specific cases?

E. Should employers have access to knowledge concerning delinquency records of job applicants?

F. What responsibilities go with the rights under due process?

X. Projects

A. Interview a probation officer or juvenile judge.

B. Read the accounts of the Supreme Court case as reported in the local and other newspapers.

C. Interview the chairman of the local juvenile conference.

D. Interview a policeman on the rights of juveniles before the law.

SKILLS BEING DEVELOPED

Knowledge, comprehension, analysis, application, synthesis, evaluation.

CONTRIBUTED BY

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COMPLEX NUMBER SYSTEM

SUBJECT AREA

Math

MATERIALS

Bell, E. T. Men of Mathematics. New York: Simon and Schuster, 1965.

Broome, Elizabeth, editor. Educating for the Future: 21st Century Teaching. Raleigh, N.C.: Dept. of Public Instruction, 1975.

Hogben, Lancelot. Mathematics for the Millions New York: W.W. Norton and Co., Inc., 1968.

Johnson, Richard E. Algebra and Trigonometry. Menlo Park, Calif: Addison-Wesley, 1971.

Kane, Robert B. Algebra and Trigonometry. New York: American Book Comapny, 1971.

Newman, James R. The World of Mathematics, Volume I. New York: Simon and Schuster, 1956.

*Nichols, Eugene. Holt Algebra 2 with Trigonometry. New York: Holt, Rinehart, and Winston, 1974.

Scott, J. F. A History of Mathematics. New York: Harper and Row, 1975.

*Sorgenfrey, Robert. Modern Algebra and Trigonometry, Book 2. Boston: Houghton Mifflin Company, 1973.

Spreckelmeyer, Richard. The Complex Numbers. Boston: D. C. Health and Company, 1960.

*Student and Teacher Texts

OBJECTIVES

Students will:

1. Recognize need for imaginary numbers. (1,a,c)*

2. Define imaginary numbers (1,b)

3. Perform operations using imaginary numbers. (3,4,b,d)

4. Define complex numbers. (2,3,a)

5. Devise four operations using complex numbers. (3,4,5,d,e)

6. Transfer properties of real system to complex system. (4,5,6,d,e)

7. Organize concepts of complex system. (i.e., closure, commutative, associative, identity, inverse properties of addition and multiplication, distributive property, etc.)

8. Consider the usefulness of complex numbers in solving quadratic equations. (4,5,6,c,d,e)

9. Write quadratic equation from two complex roots. (1-6, a-e)

10. Compare graph of real numbers with complex numbers. (1-6, a-e)

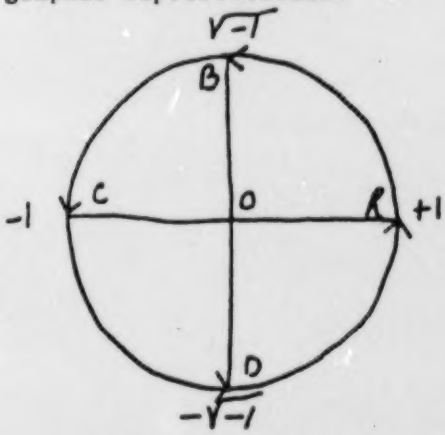
DESCRIPTION

Through participation in classroom activities students will be introduced to the complex number system and will be challenged to define operations and to observe properties of the real number system that are valid in the complex number system. This knowledge of complex numbers is mandatory for all Algebra II students for additional study of quadratic and trigonometric functions; however, this particular unit is designed primarily for the gifted and talented with emphasis on inquiry, organization and evaluation of this mathematical field.

Students have completed a study of the real number system and have used the inquiry approach.

ACTIVITIES

1. Given the equations $x^2 + 1 = 0$, students seek solution. Teacher and students develop imaginary number. One suggested approach is the graphic representation.



In rotating 180°, OA changes in value from +1 to -1.
When OA rotates through 90° (to OB), its value must be multiplied by some factor ----------X.

OB = 1 (x)
OB = x
Then $OC = 1_2(x)\ (x)$
$OC = x^2$
$OC_2 = -1$
Since $x^2 = -1$
Then x = -1, the imaginary unit

2. Given a set of imaginary numbers, students perform the four binary operations and classify results.

3. Students accept formal definition of complex numbers. Through interrogation they determine that operations are needed to form mathematical field.

4. Students form groups to identify definitions of four binary operations with both concrete and abstract complex numbers. Students report definitions to class for evaluation. (Speak to me in algebra)

5. Students are assigned set of exercises from text to simplify and perform operations using complex numbers. Reinforce by playing mathematical bingo.

6. Given the set of complex numbers, students brainstorm with properties or theorems of real number system that might apply to complex system. (i.e., Closure, commutative, associative, distributive, identities, inverses, etc.)

7. Students group to write these properties in rule form. More advanced students prove a theorem to present to class.

8. Students detect fallacy in the following statements.

a.

$$\text{Since, } \sqrt{x} \cdot \sqrt{y} = \sqrt{xy}$$

$$\text{it follows that, } \sqrt{-1} \cdot \sqrt{-1} = \sqrt{(-1)\ (-1)}$$

$$\text{thus, } (\sqrt{-1})^2 = \sqrt{1}$$

$$\text{and } -1 = 1$$

b. If order exists in real number system, then it exists in complex system.

c. The graph of $2x + 3y = 7$, $x, y \in C$, is a line.

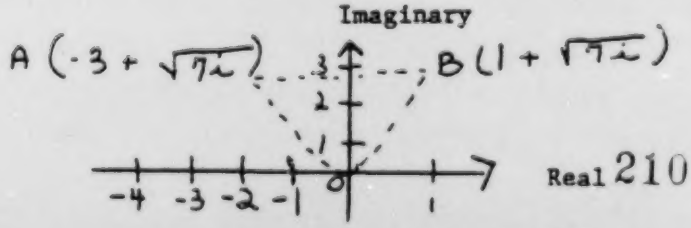
d. The only solution to the following problem is (4,2), (-2,2) . Two men left a certain place and walked, each in a straight line, to their destinations which were 4 miles apart. If the distance which one of them walked was one-half the square of the distance which the other man walked, how far did each man walk?

$$(1)\ \left.\begin{aligned} y - x &= 4 \\ y &= \tfrac{1}{2} x^2 \end{aligned}\right\} \text{ yields real numbers}$$

(when men walk on same straight line)

$$(2)\ \left.\begin{aligned} y - x &= 4 \\ x &= \tfrac{1}{2} y^2 \end{aligned}\right\} \text{ yields complex numbers}$$

(when not on a straight line



Students demonstrate conclusion to class.

9. Students are assigned exercises from text to review for short quiz on computation and theory of complex system.

10. With student participation, teacher reviews solving quadratic equations by extracting square root, factoring, completing square, and quadratic formula on overhead. (Use real coefficients.)

11. As classwork and homework students solve quadratic equations using all methods. (Use real coefficients.)

12. Students compare answers from previous assignment and classify nature of roots.

13. Students draw a complex number from that to use in formation of quadratic equation with real coefficients. Student produces the other root.

Enrichment

1. Students interview electrical engineer to find practical application of imaginary numbers.

2. Students transfer $\underline{a + bi}$ to $\underline{x + vi}$ and graph complex numbers on complex plane.

3. Students research history of imaginary and complex numbers and write short essay.

4. Students create a complex number puzzle using vocabulary.

5. Students evaluate $(i)^i$ or $(\sqrt{\sqrt{-1}})$.

6. Students present a research paper on a number system of which the complex system is a subset.

7. Write a computer program for solving quadratic equations.

8. If a computer terminal is available, students participate in programs designed for complex numbers.

9. Situation Problem:

Mrs. Newcomb had rearranged her living room furniture, but was unsure about the placement of a large round table. Her husband was a bit absentminded and occasionally wandered through the house in the dark. She wanted to place the table so that he could walk from the door at one corner of the room to the diagonally opposite corner without bumping into it. She had put the table, which was 4 feet in diameter, in the corner to the left of the door. Its center was 3 feet from the 15-foot wall and 5 feet from the 9-foot wall. Could she safely leave the table there?

10. Encounter Lesson:

"Mission: Number System" - Situation: A planet has just been discovered which has an intelligent life form. You have just returned from a visit to the planet and are part of a committee selected by the Federation of Earth Government to aid the new planet in intelligent growth. Your mission is to help them develop a number system that will facilitate their intellectual growth and achievement.

Method: Students should devise a number system and some of its properties that would enable the new-found beings to develop so they could merge into the intelligent life community.

Purpose: It is hoped that the students will see the reasons why our number system developed and will try to help these beings develop a system of their own instead of forcing our system on them.

Questions for Discussion

1. Is there a number that will satisfy $x^2 = -1$? (5,8)*

2. Does order exist in the complex number system? Prove your answer. (3,4,7)

3. How could we possibly graph the imaginary number? (6)

4. How many properties of the real number system can you name that might apply to the complex system? (1)

5. Is it possible to find three roots of the equation $x^3 = 8$? (2,4)

6. If a quadratic equations has two roots, how many could you expect in a cubic or higher degree equation? (2,4)

7. How can you relate the absolute value of a real number with the absolute value of a complex number? (4)

8. How many complex numbers have the same absolute value? Explain your answer using examples. (6,8)

*Key to Williams Model of Thinking-Feeling Behavior

Cognitive:	1. Fluent thinking	Affective:	5. Curiosity
	2. Flexible thinking		6. Risk Taking
	3. Original thinking		7. Complexity
	4. Elaborative thinking		8. Imagination

Evaluation

1. Short quizzes
2. Class evaluation of definitions and proofs
3. Cross number puzzles and codes
4. Student evaluation of homework
5. Unit test

SKILLS BEING DEVELOPED

*1,a,c refers to the nature and level of the objective as described by Bloom.

Cognitive:	1. Knowledge	Affective:	a. Receiving
	2. Comprehension		b. Responding
	3. Application		c. Valuing
	4. Analysis		d. Organization
	5. Synthesis		e. Characterization by a value

CONTRIBUTED BY

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LILLIPUTIAN MATH

SUBJECT AREA

Math, Language Arts

MATERIALS

Plenty of string for all, scissors.

OBJECTIVES

Students will be able to arrive at own formula for the Lilliputians' clothing of Gulliver.

DESCRIPTION

Students sometimes need to be reminded of how math skills fit in with other material they are studying. This activity, which is to be done in conjunction with the reading of Gulliver's Travels, is an example of how math skills could be integrated with reading.

ACTIVITIES

1. Review or reread episode from Gulliver's Travels where Lilliputians measure only the base of the thumb, the wrist, and the neck to mid-thigh and are able to make an entire set of clothes for him. (Remember it takes 1,728 Lilliputians to equal Gulliver).

2. Divide students into pairs. Their problem:
   - -Figure out what measurements you would need for his set of clothes.
   - -Devise a formula for finding these measurements in relation to his thumb and wrist sizes. (Use metrics!)

3. The Lilliputians also had to figure out how much food and water Gulliver required. Devise a formula for finding this amount.

VARIATIONS

Have students write stories involving mathematical computation. (Science fiction lends itself to this.)

SKILLS BEING DEVELOPED

Application

CONTRIBUTED BY

Sharon Young, 1977 ECA Conference, ECA Consultant, Boulder, Colorado.

RADIATION DOSAGE

SUBJECT AREA

Science, Math

OBJECTIVES

Students will be able to tabulate an estimate of their yearly radiation doses.

DESCRIPTION

Students estimate their yearly radiation dosage.

ACTIVITIES

Directions: Complete the following table and then consider that information to answer the questions that follow.

Source of Radiation	Your Annual Dose (mrem/yr.)
1. Location: Cosmic Radiation at Sea Level add 1 for every 100 ft. of elevation where you live. (Omaha is about 1000 ft. above sea level)	40
2. House Construction: Wood 35, Brick 75, Concrete 50, Stone 70	_____
3. Ground: (U.S. Average)	56
4. Food and Water: (U.S. Average)	25
5. Air: (U.S. Average)	5
6. Jet Airplane Trips: Number of 6,000 mile trips x 4	_____
7. Radium Dial Wrist Watch: Add 2	_____
8. Television Viewing:	
_____ Black and White Hrs. per day x 1	_____
_____ Color Hrs. per day x 2	_____
9. X-Ray Diagnosis and Treatment:	
Chest X-Ray 150	
Limb X-Ray 420	
Stomach X-Ray 350	
Dental X-Ray 20	
_____ Head X-Ray 50	_____

10. Nuclear Power Plant:

At Edge	Hrs. per day x .2	
1 mile away	Hrs. per day x .02	
5 miles away	Hrs. per day x .002	_____
(Compare your dose to the U.S. Average of 200 mrem per year)	Total	_____

NOTE: One mrem per year is equal to:
- -Moving to an elevation of 100 ft. higher
- -Increasing your diet by 4%
- -Watching one additional hour of black and white television per day
- -Or taking a 4-5 day vacation in the Sierra Nevada Mountains.

Multiple Choice: Select the one best answer

_____1. Which condition would increase your annual radiation dose the least?
- A. Moving from 5 miles away from a nuclear power plant to right beside it
- B. Moving from sea level to Denver (about 6,000 ft. about sea level)
- C. Moving from a wooden home to a brick home
- D. Getting 2 instead of only one set of dental x-rays in one year.

_____2. Which condition would increase your annual radiation dose the most?
- A. Watching color television 1 hour per day
- B. Wearing a radium dial wrist watch
- C. Flying to Europe and back
- D. Working 8 hours per day next to a nuclear power plant

Fill in:

_____3. The maximum permissible exposure allowed for a radiation worker is 5000 mrem per year. How many 6000 mile trips per year would a jet pilot have to make to receive this dose?

_____4. How many chest x-rays or their equivalent could a person receive and not exceed 5000 mrem per year?

Minimum Score: 3 correct

SKILLS BEING DEVELOPED

Analysis, application.

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SUBJECT AREA

Science

OBJECTIVES

Students will be able to apply Einstein's Theory to a space war simulation.

DESCRIPTION

Below is some background and a problem relating to Einstein's Theory of Special Relativity. It was published in a student science publication out of Stuyvesant High School in New York.

ACTIVITIES

Introduction

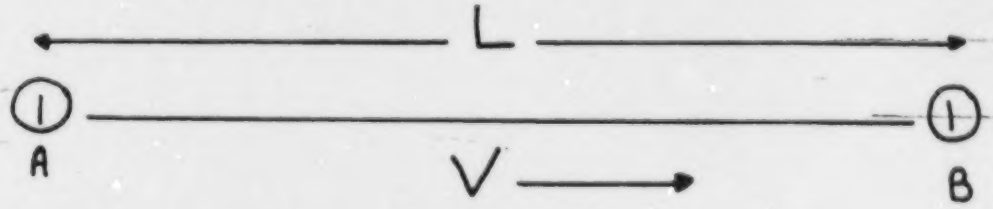
Since its publication seventy years ago, Albert Einstein's Theory of Special Relativity has profoundly changed the physicists' perspective of the universe. By introducing altered concepts of space and time, the theory has produced many results which defy common sense, the collective prejudices of mankind. The following "paradox", besides illustrating important consequences of special relativity, provides an opportunity to demonstrate how our intuitive grasp of a physical situation can be so inadequate for modern physics.

For reference and review, the following relations are included:

$$t' = \frac{t - \frac{vx}{c^2}}{\sqrt{1 - \frac{v^2}{c^2}}} \qquad x = \frac{x - vt}{\sqrt{1 - \frac{v^2}{c^2}}}$$

where v is the relative velocity between two intertial frames of reference; (t,x) are the time and space coordinates of an event in frame Sand (t',x') those in Frame S'.

When two clocks are separated by a distance L in their proper frame, and are both moving along their axis with velocity v relative to an observer O, O perceives the rear clock to be ahead of the first by a time equal to Lv/c^2.



The Paradox

Two races of intelligent aliens are engaged in a deadly war for control of the galaxy. A Dorsai warship is determined to destroy a Vorn passenger vessel. Both are ten meters long and are traveling towards each other with velocity $u = \sqrt{15/16}\ c$. The Dorsai ship has a sensor on its nose so that the cannon on its tail will fire an extremely fast missile when the sensor coincides with the tail of the Vorn craft.

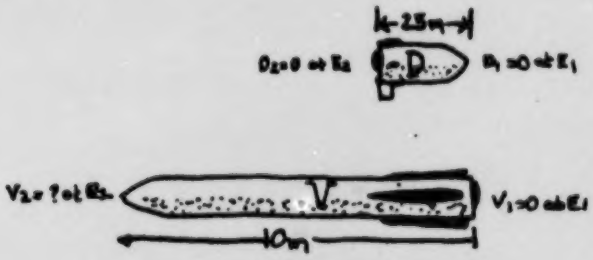
Now in the Dorsai frame of reference, the Vorn ship is rushing forward at $\sqrt{15/16}\ c$. As $L' = L\sqrt{1 - \frac{u^2}{c^2}}$, it appears only 2.5 meters long, so that the shot will obviously miss.

However, in the Vorn frame, the Dorsai rocket is merely 2.5 meters in length, and, obviously, the ship will be blown apart. Either the ship explodes or it stays whole, it cannot do both. What actually happens?

The Solution

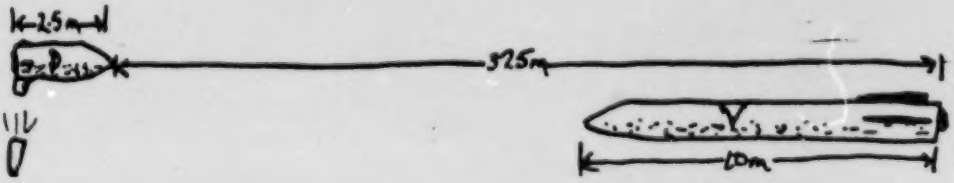
The Vorn got away without a scratch since time, as well as length, is dependent upon velocity. To prove that the shot misses, we look at the events in the Vorn's proper frame. (We could do the same in the Dorsai frame):

Introducing clocks V_1, V_2, D_1 and D_2 at both ends of the ships will help clarify the situation. Also, let E_1 be the event of the sensor activating, and E_2 be the firing of the missile. Clocks V_1 and D_2 read zero at E_2.



According to the warship, there is no time delay between the sensor activating and the shot firing. Therefore, if $D_1 = 0$ at E, then $D_2 = 0$ at E_2. However, the Vorn observe that the Dorsai clocks do not run in unison, but that D_3 is ahead of D_1, by $\frac{LU}{c^2}$ or $\frac{2.5\sqrt{15}}{c}$ seconds. Because two observers must agree on the simultanity of two events occurring in the same place and time, the Vorn agree with the Dorsai ship that D_2 reads zero when the cannon shoots.

Therefore, the Vorn note that D_2 must have read zero some time before $D_1 = 0$. As the Vorn say that the Dorsai clocks run slowly ($t' = t\sqrt{1-\frac{U^2}{c^2}}$) E_2 occurred at $t = -LU \div (c^2\sqrt{1-U^2/c^2})$ or $\frac{10\sqrt{15}}{c}$ seconds ago. In that time, the Dorsai traveled a distance d=ut or 37.5 meters. This means that the missile was fired <u>30 meters</u> in front of the target, and the Vorn were saved by extremely poor marksmanship.



SKILLS BEING DEVELOPED

Application

CONTRIBUTED BY

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Exercise 42. A Practice Problem

SAMPLE FLOWSHEET SET

PROBLEMATIC SITUATION OR "MESS"

I. Fact-Finding

Concentrate on column 1 first; then go on to columns 2 and 3.

What other facts would you like to have about the "mess"? (List Fact-Finding questions, not judicial or creative ones. Don't worry whether or not you can get the information; if you would like it, raise the question.)	Where might the answers to the most significant questions be obtained? For each of the circled questions, list all conceivable sources of information.	When you are able, investigate your circled sources for further information on the "mess." Meanwhile, assuming you cannot do this now, move on to Flowsheet II.

II. Problem-Finding

List all the creative-type questions (problems or challenges) suggested by the "mess" (such as: "How might I...?" "What ways might I...?" "What ideas might I produce to...?" etc.). If "fact-finding" or "judicial"-type questions occur to you, convert them to "creative" types by stating them as "How might I find out...?" or "How might I decide...?"

1. _____

2. _____

3. _____

4. _____

5. _____

Stop a moment and ask, "What is the real problem?" "What is my basic objective?" "What do I want to accomplish here?" Ask "Why" of each problem you have listed. ("Why do I want to do this?") As a result of these questions you ask yourself, try to restate and broaden your problem. For example, asking "Why" of the problem "How might I catch the mouse?" led to the restatement "How might I get rid of the mouse?" Try, similarly, to find problem statements (questions) that allow you the largest number of possible approaches. Try paraphrasing, changing the verbs in your statement, etc. Keep listing as many additional "How might I" questions as you can about the situation.

6. _____

7. _____

8. _____

etc.

Now circle the best, most promising problem statement for creative attack (from all listed). Perhaps it is the one that would give you the greatest leeway, the largest number of approaches or areas for exploration - the one that includes most of the other ones. Or it may be one of the narrower statements that is really the crux of the situation. In any event, choose the one that is most significant to you - the one most in need of creative attack.

NOTE: You may want to go back and consider additional fact-finding on the first flowsheet, now that you have restated your problem. With the new wording, you may have other fact-finding questions that you would like to note for further exploration.

(Use additional pages as needed.)

UNIT SEVEN

III. Idea-Finding (deferred judgment)

Problem Statement selected on previous sheet (Be sure your statement is clear, concise, as brief as possible, worded as a "telegram"; also, be sure that it starts with words such as "What ways might I...?"):

(Write statement here)

IDEAS (tentative leads to solution):

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

Now go back and circle the ideas that seem to offer the best potential (judgment).

NOTE: If your original problem statement was quite broad, you may find that your ideas listed on this sheet are really "sub-problems." For example, consider the problem, "How might I increase sales of our yearbook?" You might list ideas such as "interest more students," "step up advertising," etc. In cases like this you could choose one of these "approaches" at a time, and then probe for more specific ideas. ("How might I interest more students?" "How might I step up advertising?" etc.) In such cases you will want to repeat this flowsheet (using one of the more specific "approaches" as the problem statement each time) and follow all subsequent flowsheet procedures for each of these approaches, or for the one best approach. (Use additional pages as needed.)

IV. Solution-Finding

First, list criteria (read explanation); next proceed as mentioned below.

Evaluation Criteria: What are the "yardsticks" by which you can mentally test the effectiveness of each of your ideas? These criteria are really a further measure of your sensitivity to problems - problems that might be implicit in changes that would be brought about by each idea. Try to anticipate all effects, repercussions, consequences. Look over the facts of the situation for leads to important criteria.

CRITERIA										Indicate Decision Below	
										Use Now	Hold	Reject	Modify (How?) (Try to improve ratings on criteria)
1.													
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													
11.													

Tear this page out and lay it alongside your ideas on the previous flowsheet. Evaluate those circled on Flowsheet III as offering the best potential. For each of these ideas, indicate a rating in each block (e.g., G ["good"], F ["fair"], P ["poor"], DP ["doesn't pertain"], etc. Then make a decision regarding each of the circled ideas (based on its ratings under the various criteria) by checking or commenting in one of the boxes under "Decision."

UNIT SEVEN

V. Acceptance-Finding

NOTE: This sheet is designed to help you use creative thinking in preparing to put an idea into effect. This should be followed for each idea you select for use.

First idea (or combination of ideas) to be developed (select from previous flowsheet)

---> (Write Idea Here)

	DO NOT FILL IN THESE COLUMNS UNTIL FINISHED WITH FIRST COLUMN (See bottom of page)	
Column A Ways of implementing, carrying out, accomplishing, gaining acceptance for, ensuring effectiveness of, improving, etc., the above idea (deferred judgment)	Column B Who, when, and/or where?	Column C How and/or why? (How gain acceptance and enthusiasm of others for ideas?)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Now go back and circle the best ideas in column A (Judgment); then, for each circled one, list further thoughts: the who, when, where, how and why, as indicated in columns B and C. Search for several alternatives in columns B and C for each item circled in column A. Then circle the best alternative(s) in each case.

INSTITUTE FOR POLITICAL AND LEGAL EDUCATION

I. Function and Methods

The function of the Institute for Political and Legal Education (IPLE) is to provide a program to instruct secondary and middle school students in the political, governmental, and legal process. Through the IPLE program, students demonstrate a significant positive increase in their knowledge and reveal an inclination to participate actively in the political process and law-related fields.

A unique feature of the program lies in the view of the total community as a classroom, since it attempts to utilize all resources in the community and state as a real and practical base for learning. Students often are out of school for twenty days per school year, involved in field study and interning. Working in the community provides students, through experiental learning, an opportunity to apply the skills acquired in the classroom. This can be accomplished at the local, county, and/or state levels.

Through surveys, problem solving, issue analysis, research, simulations, field study, and interning, students acquire the ability to initiate projects which affect their community in a positive manner.

The key to IPLE's popularity with students, teachers, administrators, and community leaders is its foundation in the real world of political action. Students do not watch an election from the sidelines--they are a part of it! They do not memorize the names of Supreme Court Justices--they actually see the court system in action! In situations where the students cannot spend a great deal of time in field experiences, community resources can be brought into the classroom.

II. Curriculum and Activities

The curriculum is subdivided into several areas of concentration, alterable by the interests and selections of the students and teacher. An integrated combination of innovative informational and instructional manuals is utilized within each unit of study, along with simulation games, surveys, projects, audio/visual materials, and relevant interning. In addition, individual classroom, regional, and state-wide training conducted by professional experts provides participants with training in methods for using the curriculum.

The components of the program can be used as discrete units or as a total curriculum in semester or year-long required or elective courses. The IPLE program can also be integrated with existing social studies classes.

Intermediate Curriculum (Grades 4-6)

Lawmaking is designed to increase awareness of the importance of law in society. Nineteen lessons, each focused on a specific objective, examine the need for laws and for active citizen participation, how laws are made, the part played by lobbyists, the work involved in a political campaign, and the importance of voting. Lively graphics and photos illustrate lessons which include writing laws for a "perfect place," analyzing cases of rights in conflict, and taking part in a mock political election.

Juvenile Problems and Law emphasizes the student's need to solve individual problems before they become legal problems. Covers the legal rights of juveniles and the social causes of youthful delinquency. Exercises utilize actual experiences of young people and include open-ended stories, juvenile case histories, an analysis of what happens when arrested, historic changes in the juvenile court system, and stories about young people involved in crimes.

Youth Attitudes and Police focuses on the relationship between young people and the police. This work/text involves students in a study of the concept of authority, the problems of police, the rules that regulate police behavior, and the roles of citizens in law enforcement. Activities include playing the roles of cadets at a police academy, identifying values in decision-making situations, crossword puzzles, vocabulary building, and applying concepts learned in the classroom to community experiences.

Secondary Curriculum (Grades 7-12)

The Voter Education unit includes the process of issue analysis, canvassing, and registration with insights into media publicity/propaganda techniques, and election strategies. Voting reform, rights and procedures, party structure, and the electoral college are examined intensively. An optional political assembly and simulated election are highlighted with historical review, candidate speakers, and local party campaigning. Activities which are encouraged during the unit include a voter registration drive in and out of school; campaigning for actual candidates (working in campaign headquarters, telephone canvassing, door-to-door canvassing); working as challengers at an election; organizing transportation and/or babysitting for election; and conducting survey polls for election in and out of school.

The Government: The Decision-Making Process unit examines the structure and function of the state, county, and local levels related to issues such as environment, housing, and transportation. Included are policy formation, lobbying, media techniques, sociological surveying, and value orientation. Simulation games are used for the purpose of demonstrating to the student the decision-making process of governmental bodies. In addition, students learn the operation of intergovernmental communication and are provided with a practical knowledge of labor-management relations. How a bill becomes a law is experienced in out-of-school interning at the State Legislature and/or a professional lobbyist's office and at a simulated three-day Model Congress.

The Individual Rights: Rights of the Accused/Freedom of Expression unit concentrates on the foundation of law, criminal procedures and the laws and court decisions which protect the rights of the accused and freedom of expression. Case studies are presented in which students analyze historical court decisions. Students are encouraged to formulate their own law, evaluate its precision, jurisdiction, limits of enforcement and possible alternatives. Included are simulation activities, role play, field study and interning possibilities, as well as value strategies.

The Fair Trial vs. Free Press unit follows a similar format as suggested in Individual Rights. This unit concentrates on those cases which dramatize the difficulty of reconciling two basic constitutionally guaranteed rights: a fair trial and a free press. (This unit is currently being revised so as to examine a wider range of issues touching on the first amendment and the media.)

Juvenile Justice is a new curriculum unit designed to acquaint young people with their rights and liabilities under the law as it affects them (a) in school, and (b) under delinquency codes and the juvenile court system. Special emphasis is given to "the system" as it operates within New Jersey. This curriculum answers questions about how young people can play a greater role in making decisions which affect their lives, how civil liberties can be better protected or expanded in the administration of justice, and how some of the problems which lead up to youth unrest and crime can be solved.

Law and the Family is another new curriculum unit covering legal issues related to getting married and divorced, and to attributes of marriage and family relationships. Suggested teaching strategies and activities are included for dealing with such timely and controversial topics as custody rights, abortion, adoption, and the "right to die." This curriculum provides educators with materials and ideas in a subject area long neglected in the field of law-focused education.

III. Development and Validation

The Institute for Political and Legal Education was developed through the cooperative efforts of the Institute staff, educators in local New Jersey districts, and the staff of the Office of Program Development, Division of Research, Planning, and Evaluation/Field Services, the Department of Education, State of New Jersey. The core of the curriculum was developed between 1971 and 1974 with funding from the Elementary and Secondary Education Act, Title III.

In 1974 the secondary schools' program was validated as successful, cost-effective, and exportable by the standards and guidelines of the United States Office of Education. As a result, the program is now funded through ESEA, Title IV-C and the National Diffusion Network, as a demonstration site to provide dissemination of materials and services to interested educators. In 1977, the State of New Jersey validated the two secondary units, Juvenile Justice and Family Law, and the Middle School program.

PROJECT LEARNING TREE

Supplementary Activity Guide

For Grades 7 through 12

VI.133

Tree Verse

2

SUBJECT
Language Arts and Humanities

GRADES
7-12

PLT PRINCIPLES
1. Environmental Awareness
3. Cultural Contexts
7. Lifestyles

CONCEPTS
1.1 Variety in Aesthetic Essential
3.4 People and Biosphe
7.4 Creative Expression and the Environment

SKILLS
I. Gaining Information
II. Communication
VI. Valuing

OBJECTIVE

Students will be able to express attitudes and feelings about trees and/or forests in a poetic form.

ACTIVITY

This activity should be conducted outdoors, if possible.

Ask each student to brainstorm a list of 15 adjectives which could describe a tree or a forest. Repeat the exercise using verbs. Ask the students to arrange words from these lists into poems in the form of free verse, haiku, or cinquain. Rather than brainstorming the lists individually, the entire group of students can generate extensive lists of words. Then each student might work independently to write one or more poems.

Haiku, originated by the Japanese, consists of three lines of five, seven, and five syllables each. The emphasis is syllabic, not rhyming. Example:

The snow covered tree
Sparkles in the soft moonlight
The wind rushes by

Cinquain is derived from the French and Spanish words for five. This form of poetry also is based on syllables, but there are five lines. Each line has a mandatory purpose and number of syllables. These are (1) the title in two syllables, (2) a description of the title in four syllables, (3) a description of action in six syllables, (4) a description of a feeling in eight syllables, and (5) another word for the title in two syllables. Example:

Forests

Graceful, growing
Climb among the clouds
Joyfully stalking the sunset
Alive

2

(Continued)

After the students have completed their poems, you and they might discuss these questions, encouraging the students to investigate some ideas they feel they have insufficient information to discuss:

Does your poem convey your view of humankind's place in nature? How? Does it include any effects humankind may have on nature? That nature has on humankind? Discuss some of these interactions.

In the past what has been Western culture's view of nature? Do you believe this view is changing? On what evidence is your answer based?

Has Eastern culture, such as in Japan where haiku began, viewed nature and humankind's place in nature differently than Western culture? Are traditional Eastern views changing? In what ways? What is the evidence to support your answer?

Have Native American cultures viewed nature the same or differently than the dominant Eastern and Western philosophies? In what ways?

Do Third World nations appear to view nature differently than the dominant cultures in the rest of the world? Give evidence to support your reasons.

Does the poetry produced by the people of these cultures provide any indications of their views of nature?

Have these cultures' views of nature influenced their behavior toward it? If so, how? What implications for future generations do you see as a result of each of these cultures' view of nature and behavior toward living and nonliving things?

7

Nature's Air Conditioners

SUBJECTS
Science
Mathematics

GRADES
7-9

PLT PRINCIPLE
2. Diversity of Forest Roles

CONCEPTS
2.1233 Effect on Humidity
2.121 Atmosphere Affected by Plants

SKILL
1. Gaining Information

OBJECTIVE

Students will be able to calculate the amount of moisture evaporated by plants through the process of transpiration.

ACTIVITY

Direct each of your students to tie a plastic bag around a leaf on a tree. Including a small, clean pebble weights the bag so it hangs down, and the water collects rather than runs out of the bag. The bag should be secured tightly on the stem of the twig to which the leaf is attached and left for 24 hours.

Ask your students to observe the condensation of moisture on the interior of the plastic bag as a result of what is called *transpiration*. Students should remove the bags carefully so that none of the water is spilled and measure the water by volume and by weight. Then they might discuss and answer these questions:

How much water did the leaf transpire in 24 hours?
Count the number of leaves on a small tree. How much water do you estimate was evaporated by the entire tree?
How might trees' transpiration affect the temperatures and humidity in a forest?
If possible, measure the temperature and humidity in a forest area and see if you are right. Compare with data gathered from a nonforested area.
What effect, if any, might trees have on weather and atmosphere in a populated urban area? In an irrigated desert region?
What other implications are there related to tree transpiration?

EXTENSIONS

1. Conduct the leaf experiment again using two different leaves. Wash both leaves gently. Then dust flour on one leaf; keep the other leaf clean. Wrap each leaf with a plastic bag as before. Taste the water collected in each bag. Discuss the differences and their implications; for example, related to pollution.

   Caution: If a spray has been used on the tree, *don't* taste the water!

2. Check the difference, if any, in transpiration rates in daylight hours and hours of darkness, and on cloudy days as contrasted with cloudless, sunshine-bright days. Try to explain any differences.

30

Environmental Editorials

SUBJECTS
- Langage Arts and Humanities
- Journalism
- Social Studies

GRADES
- 7-12

PLT PRINCIPLES
- 3. Cultural Contexts
- 4. Societal Perspectives on Issues

CONCEPTS
- 3.42 Environmental Perspectives
- 3.421 Cultural Perceptions
- 4.12 Language as Influence Tool
- 4.13 Value-Loaded Language
- 4.221 Conservation Policies by Group Action
- 4.4 Variety in Use
- 4.41 Respect for Preferences of Others
- 4.45 Use of Public Lands
- 4.46 Private vs Public Rights

SKILLS
- II. Communication
- III. Social Participation
- I. Gaining Information
- IV. Critical Thinking
- VI. Valuing

OBJECTIVE

Students will be able to recognize techniques of propaganda and persuasion used in the mass media.

ACTIVITY

Give this background information to your students:

You live in Woodsville, a medium-size community where logging and related occupations are one of the major industries. The West Lumber Co. has announced that timber on the state-owned Dennis Tract will be cut in a few weeks. The cutting method will be "group selection," a process in which all trees (for example, three or four trees) in a small area are removed. The management goal is a sustained yield of timber from the area.

The Dennis Tract is not the only large forested area near Woodsville, but it is the closest and most accessible. It is used by many picnickers, hunters, school study groups, fishermen, and others each year. Because of the energy shortage, this recreational use is expected to increase.

West Lumber Co., which purchased the timber from the state, has agreed to several conditions in response to concerns expressed by the community. It promises to leave certain choice areas untouched and to provide access to them; to conduct logging operations in a way which will minimize aesthetic damage during harvest, and to reforest as soon as possible after logging.

Public opinion is divided in Woodsville. Timber industry employees favor the logging plan. The Board of Education is not sure which is of more value, the natural area for study or the state funds they will receive as revenue from the logging operation. Some sports and wildlife interest groups favor the plan because it may increase the population of certain animals, particularly large game animals such as deer. Other sports, wildlife, and nature study organizations oppose the logging. They believe the site has more value as a natural area and are worried that logging and road-building will harm some wildlife, especially fish, and also the water quality of the streams.

The company's position is that it has met all the legal requirements stipulated in its sales contract and, moreover, has made additional efforts to protect values the community considers important. It plans to go ahead with logging operations but a local citizens' coalition still hopes to be able to prevent the harvest.

(Continued)

30

Ask students to assume the roles of local editorial researchers on the *Woodsville World*. Their managing editor has not decided which position the respected and influential newspaper should support on this issue. The editor has asked staff members to write two editorials, one for and one against the West Lumber Co. plans.

Students should write their editorials to make them as convincing as possible. They may use freely any value-laden words or phrases which they believe will contribute to the effectiveness of their argument. Other propaganda techniques, such as stating some facts and ignoring others, may be used but students may not say anything which is untrue. Researching factual data should be encouraged.

After the editorials are completed, share them in class to determine how choice of words, selection of facts, and other techniques were used to build a case for one viewpoint or another. Then discuss:

Did the value-laden words or phrases tend to clarify or cloud the issue?

Did you notice any obvious omissions of significant facts in any of the most effective editorials? What were they?

Have you recognized any of the opinion-molding techniques you used also being used by the local media in newspaper, radio, or television editorials?

EXTENSION

Investigate regulations affecting logging practices. Regulations can exist at both national and local levels. Through research including contact with experts representing diverse points of view related to forest management, investigate and discuss issues related to the following questions:

Given the base of information you have established in this hypothetical situation, if you lived in Woodsville, would you support the West Lumber Co. or the citizens' coalition? Might your position be different if you lived somewhere else? Describe the bases for your response to each question.

Would you have a different opinion if the company owned the land instead of the state? Why or why not? How would your opinion change?

Are there other alternatives available for the Dennis Tract besides logging or not logging? If so, how might the community conflict be resolved to the satisfaction of the company, the coalition, and the entire community?

How might this conflict be resolved most reasonably to the maximum long-term benefit for all involved, including wildlife, vegetation, other natural resources, and human interests?

What implications of the problem might there be for people living in other places in the United States? In other parts of the world?

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We Can Work It Out?!

SUBJECT
Social Studies

GRADES
7-12

PLT PRINCIPLES
4. Societal Perspectives on Issues
5. Management and Interdependence of Natural Resources
2. Diversity of Forest Roles
7. Lifestyles

CONCEPTS
4.3 Flexibility in Resource Management
4.4 Variety in Use
5.4 Values vs Uses
2.1 Forest Uses and Values
2.124 Aesthetic Benefits
2.1242 Variety of Leisure-Time Activities
7.211 Pressure on Forest Recreational Facilities

SKILLS
III. Social Participation
V. Problem Solving
VI. Valuing

OBJECTIVE

Students will be able to identify compatible kinds of land uses and to describe their criteria for judging compatibility.

ACTIVITY

Hold a brainstorming session with your class with the objective of developing four lists relating to land use.

The first list should include *personal uses*, such as fishing, hunting, hiking, camping, rock climbing, and snowmobiling, which can take place in a forest environment.

The second list should include *commercial uses*, such as logging and mining.

The third list should include and reflect *community values*, such as watershed protection, wildlife habitat, and aesthetics, which the same forest might provide.

Focus the fourth list on identifying *interest groups* that would be likely to represent or promote each of the uses or values mentioned in the first three categories. Examples are motorcycle clubs, environmental groups, hunting and fishing clubs, forest industry organizations, ski-resort owners and developers, and real estate brokers. Ask students to role-play members of these groups as they construct a "conflict matrix."

After conflicts have been identified by the matrix, groups with incompatible self-interests can meet to attempt to work out a solution. While attempting to reconcile their conflicts, students could consider:

Are any of the activities always in conflict or does the incompatibility vary with time and in intensity?

What characteristics of the conflicting activities make them incompatible?

What criteria are you using to determine incompatibility?

Do you believe the conflicts will become more or less frequent in the future? Why?

What must each group be willing to sacrifice in order to reach a compromise?

What are the benefits of each compromise to the interest groups, the individual, the community, the rest of the nation?

EXTENSION

Groups which have worked out solutions to their conflicts may submit their recommendations to actual groups in the community which are experiencing similar conflicts "for real." Ask the community organizations to read and comment on the students' proposals.

49

For Better or for Worse

SUBJECTS
Social Studies
Language Arts and Humanities

GRADES
9-12

PLT PRINCIPLES
5. Management and Interdependence of Natural Resources
4. Societal Perspectives on Issues
6. Life-Support Systems
7. Lifestyles

CONCEPTS
5.1 Interdependence of Resources
5.5 Trade-offs
4.1 Self-Role Perception
4.21 Responsibility for Forest Conservation
4.3 Flexibility in Resource Management
6.3 Interdependence of Living Things and Their Environment
7.123 Behavior Effects on Environment

SKILLS
I. Gaining Information
VI. Valuing
IV. Critical Thinking
V. Problem Solving
III. Social Participation

OBJECTIVE

Students will be able to identify trade-offs involved in an environmental issue.

ACTIVITY

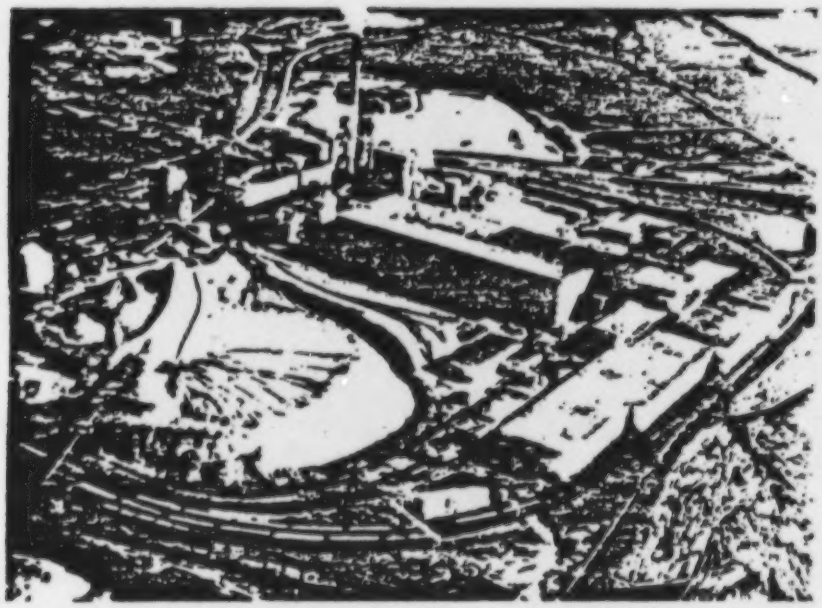
Present this hypothetical situation to your students:

Some time ago, Beauwood Paper Co. officials, in order to comply with air- and water-pollution regulations, hired pollution-control technicians to study the company's manufacturing operation. The technicians presented a pollution-reduction plan to Beauwood's board of directors. The new process reduced odorous gas emissions (air pollution) by 95 percent and the B.O.D. (biochemical oxygen demand, a measure of water pollution) added to the river by 94 percent. The control measures cost approximately $11 million to $12 million but the company was able to install the new process within a few years.

The new process had the additional benefit of enabling the company to recover and reuse or sell most of the waste products previously dumped into the river and air.

There is one problem. The new process requires substantial amounts of electricity. The power has been obtained from a coal-fired plant that had to be constructed. This plant also required pollution-control devices but it has had the advantage of generating enough new electricity to meet the increasing energy needs of the community as well as those of the paper plant. Continuing to provide coal to operate the plant, however, has become a problem, affected in part by federal legislation.

Beauwood has proposed an alternative to the coal-fired plant. The company believes it can supply the additional electricity needed by installing a wood- and wood-waste-fired boiler in its plant. Drawbacks are that this boiler would cost three times as much as one using only coal or gas, and it would not produce any excess power for the community. Beauwood believes it would have to raise prices for its products to get the necessary funds, and is also concerned that the community's energy needs will not be met.



After students have familiarized themselves with the situation, discuss these questions:

What might be the advantages and disadvantages of Beauwood producing its own energy?

What might be the advantages and disadvantages of a coal-fired power plant? A gas-fired power plant? A wood- and wood-waste fired power plant?

What, if any, other options might be available for providing the necessary power both for the plant and for the community, with minimal economic and environmental costs?

If the company installs its own wood- and wood-waste-fired boiler and then raises its paper prices, what effect might there be on sales? Would you be willing to pay more for your paper? Would you be willing to use less?

What implications does the choice of a power source have on the future of the company, the community, and on others beyond the community?

What are the trade-offs involved in this situation?

What options are available to the community?

If you lived in this community, which option would you choose? Why?

58

Predator Prey

SUBJECTS
Mathematics
Science

GRADES
7-12

PLT PRINCIPLES
6. Life-Support Systems
5. Management and Interdependence of Natural Resources

CONCEPTS
6.42 Carrying Capacity
5.1 Interdependence of Resources
5.21 Plants as Renewable Resources
5.22 Wildlife as a Renewable Resource

SKILL
I. Gaining Information

OBJECTIVE

Students will be able to make a general statement regarding the impact of land development on wildlife populations.

ACTIVITY

Given the information provided, students may solve the problems posed.

Given:

One mountain lion can eat approximately 1,095 pounds (490 kilograms) of venison (deer meat) each year (in addition to rabbits, porcupines, and other small animals). The lion probably consumes only about 50 percent of each deer he kills; coyotes and other scavengers get the rest.

One deer eats approximately 3,650 pounds (1652.5 kilograms) of vegetation/year in the form of grasses, herbs, brush, and tree leaves.

One square mile (kilometer) of deer habitat produces 800 pounds (320 kilograms) of vegetation acceptable as deer food/year. (Note: This varies depending on the region, condition of the range, and other factors.)

Problems:

1. What is the minimum number of square miles (square kilometers) of habitat needed to support one deer?
2. If each deer averages 150 pounds (70 kilograms) in weight, how many deer are needed to feed one lion for one year?
3. How many square miles (square kilometers) of deer-lion habitat are necessary for one lion to survive? (For the purpose of this problem, assume that one deer and one lion will provide continuation of the species, although of course, in reality, continuation would require many animals.)
4. Use a map of a region you are familiar with and outline an area large enough to serve as habitat for one lion. Ignore all roads, communities, and other developments which do not produce food for deer.
5. On the same map, again outline an area large enough to support one lion but this time take into account the non-deer-food producing areas. How much larger is the second area you outlined?
6. Notwithstanding all the development present in the United States today, there are more deer in this country now than there were when the first European settlers arrived How could you explain this? Find out what impact the growth of the deer population has had on other species of wildlife.

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Plan Your Community's Future

SUBJECT
Social Studies

GRADES
10-12

PLT PRINCIPLES
7. Lifestyles
5. Management and Interdependence of Natural Resources
4. Societal Perspectives on Issues

CONCEPTS
7.123 Behavior Effects on Environment
5.1 Interdependence of Resources
5.3 Urban-Forest Interdependence
4.4 Variety in Use
4.47 Zoning and Planning

SKILLS
I. Gaining Information
III. Social Participation
V. Problem Solving
VI. Valuing
II. Communication
IV. Critical Thinking

OBJECTIVE

Students will be able to state land-use planning goals, classifications, and criteria, and will be able to use these goals, classifications, and criteria in developing comprehensive community land-use proposals.

ACTIVITY

Initiate a discussion with your students based on what they want their community to be like in the future. Then ask the students to develop some long-range planning goals for their community, putting these goals in writing. Suggest that they consider, as they formulate their goals, what they think would be the optimum situation regarding such issues as population size and density, percentage of open space, provisions for housing, energy sources and uses, transportation systems, educational and recreational facilities, ecological conditions, and types of industry to be allowed or discouraged.

After they have decided upon a set of goals — working individually, in small groups, or in one large group — ask the students to draw up a list of classifications for current and proposed community land uses; for example, *high density residential, light industrial, commercial.* (*Note:* these are commonly used terms; but do not discourage students from inventing their own new classifications.) Assist them in developing criteria for each classification, including the land uses which would be permitted under it. If students decide to use a zoning system, these classifications could become the zones. Assist the students in identifying factors which should be considered in determining suitable land uses. Example factors to be considered are environmental impact, economic costs and benefits, and social needs. Once these factors have been identified and researched, the information gathered can be used to establish criteria by which the various classifications can be defined. The criteria and classifications should be consistent with the community's goals.

Next, ask the students to take a detailed look at current land uses. This could be done either by obtaining a land-use map of the community (usually available from a local planning agency) or by conducting a walking land-use survey of the community. A suggested procedure for the walking survey would be to:

1. Make large scale maps of small sections of the community. (Resource: local government engineer will have plot maps.)
2. Distribute the maps to members of the class.
3. From on-site observations, designate land uses as defined previously by the class (adding classifications if necessary) and using some kind of key or color-coding.

4. Compile a master map of current community land uses.

At this point it might be useful for students to split up into teams of three to five persons, with each team focusing on one of the goals designated as a priority by the class. Given the information about the current status of community land, and the land use classifications and criteria they have developed, ask them to develop a community land use proposal that would accomplish the goal their group has chosen to work on. After they have had sufficient time to draft or sketch a proposal, the teams can take turns making preliminary presentations outlining their ideas. In this way, two or more teams may find other proposals with which theirs can easily be combined. These teams can work together, possibly delegating various tasks such as making sketches, drawing maps, and composing written explanations, to create ever more comprehensive planning proposals. Eventually, the class may come up with one or more proposals addressing several of the goal statements they set out to accomplish.

Looking at each plan, discuss how it looks in terms of such considerations as:

Provisions for population increase. (For example, housing, industrial growth.) If there are none or few, does this fit with the group's goal concerning optimum population?

Transportation systems. Are they designed primarily for individual or mass transit, or a combination?

Efficiency of energy use. Is the energy base renewable or nonrenewable, or both?

Balance of nature. Have natural cycles been taken into account? For example, are there provisions for plant and animal communities to exist with or near the human community?

Balance of economic, social, and environmental good health. Is it possible for people to live here, make a living, and enjoy their life in harmony with the environment?

Change it represents from the present community land-use situation. What might be implications of the proposed changes in terms of the environment, the local economy, the type of people who live here, and what these people do?

From this the class can proceed to a more general discussion of land-use planning. For example, is planning necessary? Why or why not?

In practical terms, how far ahead can people plan? Should planning be short-term, long-term, or both?

How may land-use planning affect the individual, the family (consider all members separately), the people on fixed incomes, the property owner, the business person?

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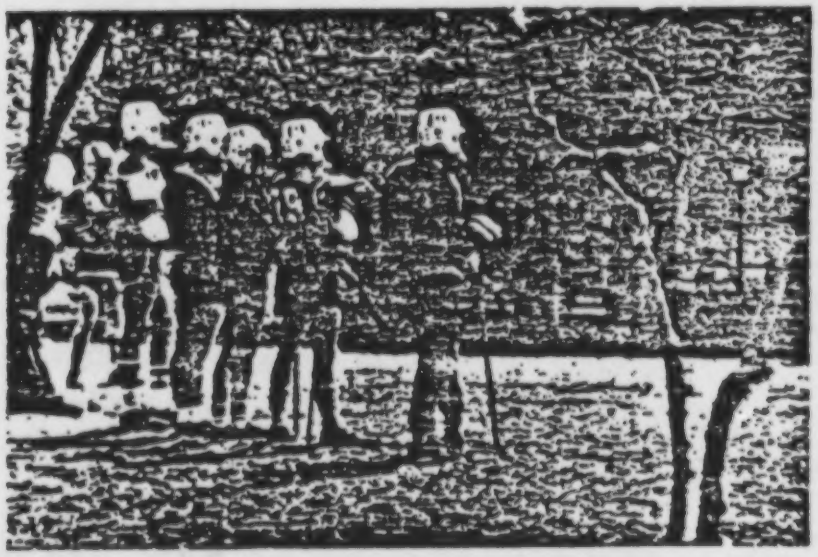
(Continued)

Assuming the plan(s) developed by the students are based on their priorities for members of the whole community, ask the students to discuss and evaluate the process of land-use planning they experienced. If they were decision-makers for a community, how much input would they want from community members as to their desires for community land-use, and how much weight would they give their opinions? If they did want input, how would they get it? How can an individual in a community most effectively and responsibly affect community planning?

EXTENSION

Take your students to your local planning office to examine the current land-use or zoning map. Compare the plan with those developed by the students, noting the differences and similarities. Invite the students' recommendations to improve the present plan. Find out whether there is a way for students to contribute to future land-use plans.

If your community has no comprehensive land-use plan, your students might wish to submit theirs for consideration or attempt to initiate a planning process using suggestions such as those listed in the Resources section of the PLT materials. They might also contact organizations such as California Tomorrow, the American Society of Planning Officials, the Conservation Foundation, and the League of Women Voters.



CHAPTER VII
Program Evaluation

EVALUATION

In planning for eventual evaluation of the effectiveness of a gifted program which is qualitatively different, teachers may find these questions helpful:

- Have the pupils improved in their knowledge and their ability to acquire knowledge?
- Has the quality of their thinking and reasoning ability improved?
- Have they developed leadership qualities commensurate with their abilities?
- How has the school affected their interpersonal relationships and attitudes?
- Has the program had an effect on their desire to learn?
- Have they developed self-understanding?

Each evaluative question has suggested methods of evaluating its accomplishment.

1. The learner will attain academic excellence:

   Use of standard evaluation tools to measure--skills of reading, writing, and mathematics; observation of use of reading, writing and mathematics materials.

2. The learner will acquire intellectual skills:

   Observe pupil's ability to analyze, define problems and find alternate solutions.

3. The learner will create original and worthwhile products:

   Observe participation in science fairs, dramas, musical activities, essay contests and classroom projects.

4. The learner will develop leadership skills:

   Student will actively participate through membership and leadership in social clubs, church organizations, scouting, community organizations, and others.

5. The learner will gain understanding of self:

   Pupil's self-evaluation of goals, aspirations and self-concept will provide pre- and post-data.

6. The learner will improve relationships with others:

   Observe pupil's willingness to help others, and interpersonal relationships. Also, self-evaluation scale by pupils.

7. The learner will refine psychomotor skills:

   Observe school and out-of-school activities such as football, basketball, track, baseball, tennis, wrestling, swimming, ice or roller skating, dance, tumbling, bowling.

The intent behind these program goals is to help each gifted student gain a realistic and healthy concept of self--to know one's own strengths weaknesses, and areas of needed improvement.

Samples of Evaluation of Qualitatively Different Curriculum

Each teacher of the gifted should be committed to the rights of each student to set his/her own learning objectives and become proficient in self-evaluation. Gifted students should be allowed to make decisions and become aware of their own unique roles in the educational process.

The following chart, Evaluation of Student Growth, will be used as a formative evaluation record of each student's progress and will be completed by the team-teachers.

Students will also be involved in an assessment of their growth. Three forms, (see Page VII.4), may be used. Each self-evaluation scale rates a different goal component: development of one's study and work habits, one's self-concept, and one's relationship with others.

Data from parents and teachers will also be sought for their evaluative input. Chapter VII Reference Materials also contain samples of forms for their input.

ALPHA PROJECT — EVALUATION OF STUDENT GROWTH

NAME _____ GRADE _____

TEACHER _____ SCHOOL _____

AREAS OF STUDY (Check all that apply)

__ Language Arts/Humanities __ Science __ Personal and Social Development

__ Social Studies __ Music __ Other (Specify) _____

__ Mathematics __ Art __ Other (Specify) _____

Brief Description of The Content of The Study _____

Beginning Date _____ Ending Date _____ Number of Days _____

OBJECTIVES (List in order of importance)

1 _____

2 _____

3 _____

4 _____

5 _____

ACTIVITIES (Briefly list what the student did to accomplish these objectives. Underline any activity that you consider to be relatively unique)

COGNITIVE OBJECTIVES

Check the "best" one for each written objective

1	2	3	4	5	6
Knowledge / Remembering	Comprehension, Translating	Application (of knowledge, principles)	Analysis (breaking down into component parts)	Synthesis, Creating	Evaluating, Judging

AFFECTIVE OBJECTIVES

Check all that apply

A	B	C
Receiving (awareness of, willingness to listen, attend to)	Responding (participation in and satisfaction in doing)	Valuing (attitudes and values, commitment, etc.)

ACCOMPLISHMENT OF OBJECTIVES

In the spaces below please indicate the degree to which you think each objective has been accomplished by

1. Placing a check mark ( ) in the appropriate space for the cognitive objective
2. Placing the corresponding letters (A,B,C) in the appropriate spaces for each of the affective objectives

Not At All	A Little	About Half	A Great Deal	Completely

RESOURCES (Reference Books, Films, People, Etc.)

PRODUCT (Briefly describe any projects, stories, plays, filmstrips, etc that resulted from this study. Attach samples if available.)

Prepared by, Dr Joseph S Renzulli - The University Of Connecticut Bureau Of Educational Research

Sponsored by, Superintendent Of Public Instruction - State Of Washington

Since the overall objective of Hicksville's gifted program will be the enhancing of the interests and talents of individual students, the program's evaluation procedure reflects that aim. Effectiveness will be determined after a longitudinal study of an individual student's growth and development over a minimum of three years.

The summative report will include data from the questions distributed to teachers and parents, and results of the individual student's project evaluation reports, and field-evaluation reports which cull data on the function of the program in the district's ten different locations. A copy of the form to be used for on-site evaluation of the program is on page VII.15.

Formative reports on the program's progress will be given annually; the summative report will be submitted in the Spring of 1985.

CHAPTER VII
Program Evaluation

Reference

CHAPTER VII

Reference Materials

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Sample of Student Contract Agreement for Independent Study	VII.1
Contract Agreement for Student Project Evaluation	VII.3
Student's Checklist of Study Habits and Work Skills	VII.4
Student's Self-Evaluation Scale	VII.6
1. Self-Concept	VII.6
2. Relations with Others	VII.7
Checklist for Evaluating the Creative Projects or Writing	VII.8
Parent Evaluation of Program Effectiveness	VII.10
Teacher Evaluation of Program Effectiveness	VII.12
Gifted Program - Field Evaluation	VII.15

*SAMPLE CONTRACT AGREEMENT

Name_____ Period_____

Date to begin: _____; Ending: _____

Are you working independently or with a group?_____

1. What is the title or subject area you want to study?_____

_____

2. Why have you chosen this area?_____

_____

_____

_____

_____

3. What books will you read for this seminar?_____

_____

_____

_____

_____

4. What other kinds of research will you be doing? (Reading in the library, writing letters, talking to specialists, field trips, etc.)

_____

_____

_____

_____

5. What resources will you be using? (Library, film catalog, encyclopedia, novels, anthologies, newspaper back issues, magazine articles, your own memory and experiences, friends, specialists, others.)

_____

_____

_____

_____

*Handbook for Principals and Teachers of Secondary Programs for the Gifted
San Diego City Schools, San Diego, CA, 1973

6. What kind of help can I give you? (Finding special books, material, or resources? Film projector, record player, opaque projector? Getting an outside speaker? Library pass, help in writing a paper, spelling, other help?)

_____

_____

_____

_____

7. What kind or work or projects will you be doing? (Check some.)

( ) Written work
( ) Report to class
( ) Report to teacher only
( ) Building something
( ) Demonstration to the class
( ) Group presentation
( ) Not connected with the school
( ) Making a film
( ) Not sure yet
( ) No project
( ) Seeing films, plays
( ) Teaching other students
( ) Some kind of test
( ) Other: _____

8. What will the results of this study be? (Knowing how to write poetry; how to read plays; reading a certain number of books; passing a certain test; writing a certain number of poems; or whatever.)

_____

_____

_____

_____

9. How can we fairly evaluate the results of this study?

_____

_____

_____

_____

10. Does this kind of program appeal to you? _____

11. Other remarks: _____

_____

_____

_____

STUDENTS' PROJECT EVALUATION

1. What was your project? _____

2. Did you learn the things you wanted to learn about this project? _____

3. What new things did you learn that you did not expect to learn? _____

_____

4. What materials did you use? _____

5. Where did you find these materials? _____

6. Where did you go for help? _____

7. How did they help you? _____

8. How long did your project take? _____

9. What were some of the problems you had and how did you solve them? _____

_____

_____

10. What were some of the problems you had that you didn't solve? _____

_____

_____

11. Did you have enough time to work on your project? _____

12. Did you make good use of the time you had? _____

13. How could you improve the use of your time? _____

_____

14. How could you have been more original with your project? _____

_____

15. What new areas did you discover? _____

_____

_____

16. What are some ways you can learn more about these areas? _____

_____

_____

STUDENTS CHECKLIST OF STUDY HABITS AND WORK SKILLS

Name _____ Date _____

Grade _____ Teacher _____

Rate yourself according to the following:

(1) never; (2) seldom; (3) about half of the time; (4) usually; (5) always

	1	2	3	4	5
Study Attitudes					
I am able to study well in school.					
I am able to study well at home.					
I budget the study time spent on various subjects.					
I have a regular time for study at home.					
I hand in my assignments on time.					
TV, radio or noise bothers me when I study at home.					
Following Directions					
I list in my notebook the assignments with dates for completion.					
I am able to understand the key points that a speaker is talking about.					
I can understand the main idea of a paragraph.					
I can draw conclusions from an oral report.					
I find it hard to follow exact directions.					
Working with Others					
I do my share of work as a committee member.					
I respect the opinions of others on a committee.					
I have my part of the committee work done when it is due.					
I am able to conduct a meeting of the class.					

	1	2	3	4	5
Securing Information					
I use a notebook for recording information.					
I know how to skim in order to save time.					
I know and use all parts of a book (table of contents, index, glossary, appendix, etc.).					
I refer to the dictionary when I find or hear a word I don't know.					
I listen to at least one news broadcast every day.					
I know how to use the card catalog in the library.					
I can read and understand the symbols on a map.					
I am able to make up a list of questions to ask during an interview.					
Organizing Information					
I take notes when I read.					
I then organize them into an outline.					
I use outlining when I give a talk or write a composition.					
Interpreting Information					
I am able to make a chart or graph from information I have assembled.					
I can tell when a prejudiced point of view is presented.					

STUDENT SELF-EVALUATION SCALE

1. Self-Concept

Name _____ Date _____

Grade _____ Teacher _____

Check according to your rating of growth in the following areas: (1) not at all; (2) somewhat; (3) average; (4) more than average; (5) exceptional.

	1	2	3	4	5
a. I think I can estimate my own strengths and weaknesses.					
b. I feel a sense of personal worth.					
c. I place too great a value on obtaining high grades.					
d. I feel a "need to know."					
e. I value learning for its own sake.					
f. I care about less bright, younger, or otherwise "different" children.					
g. I have respect for others regardless of their status, color, or creed.					
h. I am aware of the feelings and needs of others.					
i. I feel comfortable with situations which may not have "right" or "wrong" answers.					
j. I am willing to make up my own mind.					
k. I am willing to consider more than one solution to a problem.					
l. I think I come up with original ideas.					
m. I think I have a strong imagination.					
n. I produce an adequate amount of work at school.					
o. I produce work of high quality.					
p. I enjoy performing difficult tasks.					
q. I tend to stay with a problem until I can solve it.					
r. I give the responses teachers expect of me.					
s. I am willing to express my own opinions to teachers.					
t. I like to have teachers react to my ideas.					

STUDENT EVALUATION SCALE

2. Relations with Others

Name _____ Date _____

Grade _____ Teacher _____

Rate yourself according to the following: (1) never; (2) seldom; (3) about half of the time; (4) usually; (5) always

	1	2	3	4	5
1. I respect the rights, property and feelings of others.					
2. I try to obey the rules of any game I play even if others do not follow the rules.					
3. I try to discourage others from teasing or being unkind.					
4. I use self-control when someone teases or embarrasses me, in fun or otherwise.					
5. It is easy for me to express praise for other people.					
6. I would like to be treated the way I treat other people.					

CHECKLIST FOR EVALUATING THE CREATIVE PROJECTS/WRITING OF PUPILS

	0	1	2	3
Organization				
Balance				
Arrangement				
Consistency				
Conciseness				
Clarity				
Sensitivity				
Stimulus perception				
Association				
Relevancy of idea				
Specificity				
Empathy				
Psychological Insight				
Causal explanation				
Perspective				
Meaningfulness				
Ego-involvement				
Understanding				
Richness				
Expression				
Ideas				
Emotion				
Curiosity				
Fluency				
Originality				
Choice of topic or idea				
Organization				
Style of writing				
Sense of humor				
Picturesqueness				
Vividness and flavor				
Personal element				
Original setting, plot, solution, or ending				
Invented words, names, and so forth				
Conversational tone				
Use of quotations				
Variety in sentence type, length				
Personal touch and naturalness				
Questions and answers				
Feelings of characters				

PARENT EVALUATION OF PROGRAM EFFECTIVENESS

To aid us in evaluating the effectiveness of the gifted program, will you please complete and return the following questionnaire.

1. In your opinion, has participation in the program for gifted students been beneficial to your child? (yes or no) _____

   Please comment.

2. In your opinion, has participation in the program for gifted created any problems for your child? (yes or no) _____

   Please comment.

3. Are there any changes you would like to suggest for improvement? (yes or no) _____

   Please comment.

4. What specific changes have you noticed in your child which might be related to his attendance in the program for gifted students?

MOUNT PLEASANT SCHOOL DISTRICT
Special Education Programs and Services
CHALLENGE

Parent Questionnaire

DIRECTIONS: Please do not sign your name to this questionnaire. No attempt will be made to identify persons completing these forms. Please return the questionnaire in the enclosed envelope within the next two or three days.

You can help to make CHALLENGE a better program by giving careful thought to each of the questions that follow. Because of the relatively small number of persons involved in the project, each person's opinions will weigh heavily in analyzing the results. We appreciate your cooperation and assistance in helping us to evaluate CHALLENGE. Thank you.

	Yes	NO
1. Have you been provided with enough information about why your child was selected for CHALLENGE?	____	____
2. Have you been provided with enough information about the objectives of CHALLENGE?	____	____
3. Have you been provided with enough information about the activities and experiences that your child pursues in CHALLENGE?	____	____
4. Have you been invited to visit the CHALLENGE classroom?	____	____
5. Have you been offered sufficient opportunity to discuss your child's progress with the teacher?	____	____

6. Which of the following comments best expresses your child's general attitude about being in CHALLENGE?

Enthusiastic ____
Positive ____
Indifferent ____
Negative ____

7. Has your child expressed pleasure or enjoyment about the work that he or she does in CHALLENGE? (check one)

Often ____
Sometimes ____
Seldom ____
Never ____

8. Which of the following statements best expresses your child's attitude toward the degree of challenge of the work in CHALLENGE?

Very challenging _____
Somewhat challenging _____
Not at all challenging _____
No Answer _____

	YES	NO
9. Has your child encountered any problems with his friends as a result of being involved in CHALLENGE? If yes, please describe.	_____	_____
10. Do you think that the name CHALLENGE calls unnecessary attention to the children participating in the program?	_____	_____
11. Have you or your child encountered any problems as a result of being transported to another school? If yes, please describe.	_____	_____
12. Has your child expressed a concern about missing work in the regular class or making up assignments because he is out of the room to attend CHALLENGE?	_____	_____
13. Has your child's regular classroom teacher(s) expressed any displeasure because your child has missed work because he or she is attending CHALLENGE? If yes. please describe.	_____	_____
14. If your child is invited to participate in CHALLENGE next year, will you encourage him to do so? If no, tell why.	_____	_____
15. Can you identify any changes in your child's behavior or attitude toward school or education which seem to result from his or her participation in CHALLENGE? If yes, please describe.	_____	_____
16. Do you have any specific suggestions for changes in the operation of CHALLENGE or the way it affects children or their parents?	_____	_____

Number of years your child has been in CHALLENGE _____

Date: _____

Comments:

INSTRUMENT FOR TEACHERS

We suggest you read through the questionnaire before answering any items.

Please indicate the extent to which you agree or disagree with each of the following statements by circling the appropriate letter. The letters mean the following:

SA - Strongly agree
A - Generally agree
U - Undecided or neutral
D - Generally disagree
SD - Strongly disagree

Please use the comment line if you want to explain your answer.

1. I feel that the CHALLENGE program is beneficial and rewarding for its participants. SA A U D SD
   Comment _____

2. I have observed positive changes in students since their participation in CHALLENGE. SA A U D SD
   Comment _____

3. I feel our school does a good job in the regular program with the able students. SA A U D SD
   Comment _____

4. I feel there is a need for a differential education program for very bright students. SA A U D SD
   Comment _____

5. Generally the students in CHALLENGE are the ones who should be in it. SA A U D SD
   Comment _____

6. I feel our school does a good job in the regular program with the less able students. SA A U D SD
   Comment _____

7. I feel there is a need for a differential education program for the slower students. SA A U D SD
   Comment _____

8. Many students not in CHALLENGE resent the program. SA A U D SD
   Comments _____

9. I have been given sufficient information concerning CHALLENGE and its selection procedures, objectives, activities and curricula. SA U D SD
Comment _____

10. I feel there is adequate communication between CHALLENGE and me. SA A U D SD
Comment _____

11. Students participate in CHALLENGE at the expense of their regular program. SA A U D SD
Comment _____

12. I would be supportive of CHALLENGE staff visiting my class upon invitation and working on special activities appropriate for all children. SA A U D SD
Comment _____

13. I feel the CHALLENGE staff do a good job with their students. SA A U D SD
Comment _____

14. I feel that there is a need for a program similar to CHALLENGE to continue in each school once federal financial support is withdrawn. SA A U D SD
Comment _____

15. I am concerned that CHALLENGE students miss too much work and have difficulty making it up because of their participation in CHALLENGE. SA A U D SD
Comment _____

16. CHALLENGE students have developed some undesirable attitudes and characteristics due to their participation in CHALLENGE. SA A U D SD
Comment _____

17. I feel it would be helpful to visit CHALLENGE to learn about the talented student and the methods and materials used. SA A U D SD
Comment _____

Date _____

Please return directly to:

Joseph M. Price, Jr.
Project Director
Carrcroft Elementary School

MOUNT PLEASANT SCHOOL DISTRICT
Special Education Programs and Services
CHALLENGE

Teacher Evaluation of Pupil

_____ Pupil's Name _____ Grade 19___-19___ School Year

Please rate your student according to the following scale below, checking the letter a, b, c, d, e on the line following each item.

(a) Always (c) About half the time (e) Never
(b) Usually (d) Seldom

	Pre					Post Improvement		
	a	b	c	d	e	None	Some	Much
1. Is able to work independently.								
2. Is able to interact successfully as a member of a group.								
3. Demonstrates fluency.								
4. Learns easily through experiences								
5. Accepts responsibility.								
6. Is able to separate gathered information into its componets.								
7. Is able to generalize by using gathered information.								
8. Is able to evaluate gathered information.								
9. Can transfer learning from one situation to another.								
10. Is able to further develop a thought.								
11. Demonstrates persistence in tasks.								
12. Thinking processes reflect flexibility.								
13. Is able to produce new or original responses.								
14. Demonstrates good problem solving skills.								
15. Shows curiosity.								
Date:								

Comments:

(Pre)

(Post)

Completed by: _____

Evaluation Team

Staff Form
Rev. 7/73

_____(Team Reporter)

_____ Date of Visitation_____

_____

_____

GIFTED PROGRAM – FIELD EVALUATION

Program Title_____ Program Number_____

Program Site_____Dist._____Area_____

Contact_____ _____Phone_____

Teacher_____ _____

Starting date of Program_____Number of Students by grade_____

PROGRAM DESCRIPTION	OK	PROBLEM	DID NOT OBSERVE
1. Are the depth and focus of activities in the program generally such that they meet the special needs of gifted children?			
2. Are children placed out of certain aspects of the regular program as a consequence of gifted program participation?			
3. Are the program's activities compatible with the program's objectives?			
PROGRAM IDENTIFICATION			
4. Do the identification procedures correspond to those stated in the current proposal?			
5. Is student identification based primarily on objective data?			
PROGRAM MECHANICS			
6. Does the number of students in the program approximate the number of students stated in the current proposal?			
7. Are the students involved in the program at least 150 minutes per week?			
8. Does the program allow for an amount of student participation in setting objectives, planning activities, and evaluation progress?			
9. Is the interaction between teacher and students generally appropriate to the program objectives?			

From. State of Illinois Gifted Program, Office of the Superintendent of Public Instruction, Springfield, Illinois.

	OK	PROBLEM	DID NOT OBSERVE
10. Does student involvement in the program activities seem generally to be high?			
11. Are special counseling and/or guidance provisions made available to all students in the gifted program?			
PROGRAM EVALUATION 12. Is a systematic plan of evaluation being used to assess the program?			
13. Does the evaluation include measuring program objectives with respect to pupil growth?			
14. Does the evaluation provide necessary information to assess the effectiveness of the program?			
PROGRAM ADMINISTRATION 15. Were the teachers in the program involved in developing the current proposal?			
16. Do the teachers in the program have copies of the current proposal?			
17. Are materials and services being purchased necessary to the activities which comprise the program?			
18. Do the teachers in the program have access to all materials purchased specifically for the program?			
19. Are program funds being utilized mainly for program development rather than program maintenance?			
20. Is budget record kept of current balance?			
21. Are teachers aware of balance of funds allocated and deadlines for submission of requisitions?			
22. Do school clerks have special ordering instructions for materials and services for gifted programs?			
PROGRAM SERVICES 23. Are materials and services ordered for the program received within a reasonable length of time?			
24. Are you receiving the services and consultive help necessary to assist you in implementing your program?			

25. Indicate in which of the following areas you would like to receive additional assistance from the Gifted Program staff, such as:

____ Identification of gifted children

____ Developing program objectives in behavioral terms

____ Program evaluation

____ Teaching strategies

Other: _____

_____

_____

_____

_____

_____

_____

_____

_____

EVALUATOR'S AUDIT SUMMARY
(Include explanation for any item checked "problem")

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

EVALUATOR'S RECOMMENDATIONS (Please number)	FOLLOW-UP ACTION

Copies to:

267

(Team Reporter - Signature)

CHAPTER VIII
Finance

FINANCE

The Superintendent's proposed budget for 1981-82 contains sufficient funds for the implementation of the Hicksville's Gifted Program this coming school year. There is no single budget line which contains specific funds; yet, there has been a refocusing of priorities so that monies will be available for professional books, curriculum materials, instructional equipment, in-service training and consultant services during the 1981-82 school year.

No additional staff members will have to be added for the Gifted Program; yet, staffing schedules and patterns will have to be altered.

The aim of the Gifted Program is to service twenty percent of the school's population with an appropriate educational option to meet their needs; therefore, basically, twenty percent of staff personnel time must be re-allocated to perform such a service.

At the elementary level, current Library-Media specialists and reading or math teachers will be involved in the program. Twenty percent of their scheduled instructional time within a building will be allocated to the development of and instruction in a gifted program. Other resource personnel (Art, Music, Speech, Physical Education, Foreign Language, Nurse-Teachers, and Guidance Counselors) when feasible, will have blocks of time allocated to assist in the gifted program. Their time allocation will be from five to ten percent.

At the secondary level, the impact is also on the allocation of staff time. Each teacher of gifted students who is involved in an inter-disciplinary approach to instruction will have to be allocated an additional preparation period in order to pla ' confer with colleagues.

The Director of Pupil Personnel Services will be asked to assign one Guidance Counselor and one psychologist whose major responsibility would be servicing the twenty percent of our existing population who will be identified as gifted.

A coordinator for the Gifted Program is needed. A program involving staff in ten different locations cannot develop with any consistency, or coherency if an individual administrator is not supervising the coordination of efforts within and among buildings. The coordinator's responsibilities will be assigned to an administrator already on staff.

The responsibility of coordination and supervision will be assumed by our district's Supervisor of Reading. She will chair a team of experts who will be administrative decision-makers for the unfolding program. The team will consist of both Assistant Superintendents, the Director of Pupil Personnel Services, the Supervisors of Cultural and Performing Arts and Physical Education, and an Elementary and Secondary Principal.